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FURTHER ASSESSMENT OF SOILS CONTAINING RESIDUAL PERCHLORATE

Azusa Irwindale Study Area

Former Aerojet-General Corporation Facility
Azusa and Irwindale, California

Prepared for:

California Regional Water Quality Control Board

Los Angeles Region

RWQCB File No. 108.1692; SLIC ID. No. 2049R00

Prepared by:

Geomatrix Consultants, Inc.

250 E. Rincon Street, Suite 204 Corona, California 92879 (951) 273-7400

April 18, 2006

Project No. 007190.005.0



FURTHER ASSESSMENT OF SOILS CONTAINING GO NOW 15 PH W. 5-RESIDUAL PERCHLORATE

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This report was prepared by the staff of Geomatrix Consultants, Inc., under the supervision of the Engineer and/or Geologist whose signatures appear hereon.

The findings, recommendations, specifications, or professional opinions are presented within the limits described by the client, after being prepared in accordance with generally accepted professional engineering and geologic practice. No warranty is expressed or implied.

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CERTIFIED HYDROGEOLOGIS

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FURTHER ASSESSMENT OF SOILS CONTAINING RESIDUAL PERCHLORATE

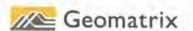
Azusa Irwindale Study Area Azusa and Irwindale, California

1.0 INTRODUCTION

Geomatrix Consultants, Inc. (Geomatrix), has prepared this report on behalf of Aerojet-General Corporation (Aerojet), to present: (1) the findings of further assessment of soils containing residual perchlorate in vicinity of Former Aerojet Grinding Station 6 (Former Buildings 6/6A), the Former Aerojet Solid Propellant Mixing Stations 8 and 9 (Former Buildings 8/8A and 9/9B, respectively) on or adjacent to the former PerkinElmer Optoelectronics SC, Inc. (PerkinElmer) property, and (2) development of Soil Screening Levels (SSLs) for perchlorate in the shallow vadose zone that are protective of underlying groundwater. The SSL for perchlorate in the shallow vadose zone developed in this report is intended to be used as a preliminary soil screening level, to guide characterization and remediation planning activities relative to the protection of groundwater. The perchlorate SSL is not intended to be used directly as a remediation or cleanup goal for soils containing residual concentrations of perchlorate because remediation or cleanup goals need to consider other factors such as existing land use, future land use, effectiveness, implementability, and cost.

The former PerkinElmer property is located within the Azusa Irwindale Study Area (AISA), which consists of properties formerly owned or leased by Aerojet covering an area of approximately 125-acres in Azusa and Irwindale, California (Figure 1-1). For purposes of this report, the former PerkinElmer property and adjacent areas will be referred to as the Study Area. The location of this Study Area within the AISA is shown on Figure 1-2 and a detailed Study Area site map is shown on Figure 1-3. The former PerkinElmer property consists of four parcels (Figure 1-3):

- two parcels on the western side of the property that are occupied by existing Buildings 1 and 2,
- one parcel on the northeast corner of the property occupied by existing Building 3, and
- one parcel on the southeast part of the parcel occupied by existing Building 4.



PerkinElmer sold all of these properties by the end of 2005. Proficiency SGV LLC (Proficiency) currently owns the two western parcels (Buildings 1 and 2) and the southeastern parcels (Building 4). Dragonis Investments, LLC (Dragonis) currently owns the northeastern parcel with Building 3.

The term Areas of Concern (AOCs), which carried a "PE" designation for the AOCs on the former PerkinElmer property, will no longer be used to name areas of perchlorate affected soil in the Study Area because these areas have changed and some have merged based on the findings described in this report. Throughout this report, areas of perchlorate affected soil will be referred to by the former operations in the area affected which was the basis of the AOC designations. For cross reference with previous documents, the four AOCs in the Study Area included PE-1 for the area in the vicinity of the Former Grinding Station 6, PE-2 for the area in the vicinity of Former Mixing Station 8, PE-3A (later renamed PE-3) for the area in the vicinity of Former Mixing Station 9, and PE-3B (later renamed PE-4) for the area south and west of Former Mixing Station 9.

1.1 BACKGROUND INFORMATION

This report describes activities performed to further characterize soils containing residual perchlorate in the areas identified in the *Remedial Action Plan* (RAP) for Soils Containing Residual Perchlorate dated June 28, 2002 (Geomatrix 2002a). The RAP and two addenda (Geomatrix, 2002b and Geomatrix 2003) were submitted to the Los Angeles Regional Water Quality Control Board (LARWQCB) for review and approval. The RAP and addenda evaluated a number of remedial alternatives and concluded that institutional controls (e.g., maintenance and/or installation of a pavement cap) that prevented infiltration of precipitation or surface runoff was protective of underlying groundwater by limiting downward migration of perchlorate in the vadose zone. In November 12, 2004, however, the LARWQCB requested further investigation of the lateral and vertical extent of perchlorate in soils in the Study Area and the development of site-specific SSL for residual perchlorate in the shallow unsaturated zone that is protective of underlying groundwater. As a result, Aerojet submitted a work plan for further assessment of perchlorate in the Study Area titled Work Plan for Further Assessment of Perchlorate in Soils at Areas of Concern (Work Plan) on January 11, 2005 (Geomatrix, 2005a).

Following LARWCB approval of the Work Plan on February 11, 2005, field work commenced and sampling was conducted in March and April, 2005. Preliminary sampling results indicated that additional characterization of the lateral and vertical extent of perchlorate in soils was



necessary to achieve the objectives of the Work Plan prior to submitting a Technical Report documenting the results of the sampling outlined in the Work Plan to the LARWQCB. Consequently, Aerojet requested a technical meeting with the LARWQCB to discuss the preliminary sampling results and the need for further sampling. This meeting was held on May 26, 2005 where it was agreed that LARWQCB would extend the deadline for submittal of the Technical Report provided that Aerojet provide: 1) a formal request for extension of the deadline of the Technical Report, 2) preliminary sampling results for samples collected in March and April 2005, and 3) an addendum to the Work Plan proposing additional sampling activities. The extension request and preliminary sampling results were submitted to the LARWQCB in a letter from Geomatrix dated May 31, 2005. This letter also indicated that a Work Plan Addendum proposing additional characterization activities and a revised schedule for completion of the sampling would be provided to the LARWQCB by June 30, 2005.

On June 30, 2005, Geomatrix, on behalf of Aerojet, submitted a *Work Plan Addendum for Further Assessment of Perchlorate in Soils at Areas of Concern* (Work Plan Addendum) (Geomatrix, 2005b) and requested approval of the Work Plan Addendum before commencing with sampling activities. On September 13, 2005, the LARWQCB provided approval of the Work Plan Addendum with several conditions including sampling beneath of the foundation slab of Building 4 and the use of a field sampling protocol for perchlorate developed by the California Department of Toxic Substances Control. Aerojet provided a response to the conditional approval of the Work Plan Addendum in a letter to the LARWQCB dated October 11, 2005. Mr. Robert Ehe with the LARWQCB responded to October 11, 2005 letter via an electronic mail to Mr. Scott Goulart with Aerojet on October 20, 2005 indicating that several issues associated with the approval of the Work Plan Addendum were still outstanding. As a result, Aerojet requested further clarification in a letter to the LARWQCB dated November 8, 2005. The LARWQCB provided further clarification to the conditional approval of the Work Plan Addendum in a letter to Aerojet dated January 24, 2006. This letter also requested the submittal of this report by April 18, 2006.

1.2 REPORT CONTENTS

The remainder of this report describes the field methods and analytical results associated with sampling activities to further assess the extent of soils containing residual perchlorate in the Study Area as outlined in the Work Plan and Work Plan Addendum. In addition, this report presents an evaluation of the lateral and vertical extent of contamination in the Study Area, presents an evaluation of the threat that perchlorate poses to groundwater in the shallow vadose zone, and presents a SSL that is protective of underlying groundwater. This SSL is to be used



for remedial action planning for soils containing residual perchlorate in the shallow unsaturated zone.

2.0 SITE CONDITIONS

The AISA comprises approximately 125 acres in the cities of Azusa and Irwindale in the north-central portion of the San Gabriel Valley, Los Angeles County, California. The study area lies at the base of the foothills of the San Gabriel Mountains near the mouth of Fish Canyon, approximately 1.5 miles east of the San Gabriel River/Santa Fe Flood Control Basin, immediately east of Irwindale Avenue, and just south of the 210 Freeway (Figure 1-1). Properties currently within the AISA include office, light industrial, and research and development buildings, with concrete and/or asphalt roadways and parking areas. The vast majority of the Site is covered with asphalt or concrete surfaces, and various buildings. Only small areas of decorative landscaping within the developed area comprise the exposed earth surfaces. The north boundary of the AISA encompasses portions of the former, partially backfilled gravel pit known as the Kincaid Pit, which is now crossed by the 210 Freeway. The south-central boundary of the AISA is the Azusa Land Reclamation Company gravel pit and landfill.

2.1 SITE GEOLOGY

The subsurface geology at the AISA has been investigated by the drilling, logging, and sampling of numerous borings and wells to depths as great as 350 feet. The vadose zone and the underlying groundwater aquifer consist of unconsolidated alluvium composed of poorly sorted sand and gravel with the gravel fraction containing cobbles and boulders as large as two feet in diameter. Thin (3- to 5- foot thick), well-sorted silt and sand layers have been encountered sporadically during drilling activities in the vadose and saturated zones.

The distribution of the poorly sorted sand and gravel with rare fine-grained silt and sand layers in the subsurface at the AISA is consistent with the deposition of sediments in a high-energy proximal alluvial fan environment. The sediments originate from the nearby San Gabriel Mountains. Fine-grained deposits associated with a proximal alluvial fan environment are typically lenses that are elongated parallel to the source direction and are not laterally continuous; therefore, precise stratigraphic correlation of the numerous fine-grained lithologic units between boreholes is difficult. This results in a scale-dependent homogeneity of coarse-grained alluvial sediments in the subsurface at the AISA.

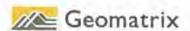


2.2 SITE HYDROGEOLOGY

Saturated conditions, representing the top of the unconfined (water table) aquifer underlying the AISA, are generally encountered at depths ranging from 265 to 345 feet below ground surface (bgs). Since the first groundwater monitoring wells were installed within the AISA in September 1992, water-level elevations have fluctuated by as much as 40 feet in a year. Water-level elevations reached a maximum of approximately 290 feet above mean sea level (msl) in mid-1993 and declined approximately 75 feet by 2002. Following heavy precipitation at the end of 2004 and beginning of 2005, groundwater recovered to approximately 270 feet msl. These fluctuations in groundwater levels are attributed to groundwater recharge and mounding from seasonal infiltration of precipitation, groundwater recharge at the Santa Fe Spreading Grounds (located approximately 1.0 mile west of the AISA), and regional declines resulting from groundwater pumping for water supply purposes in the San Gabriel Basin. Primary directions of groundwater flow within the AISA are to the southwest. However, flow generally shifts to the west during periods of declining water levels and to the east and southeast during periods when groundwater levels are rising due to groundwater recharge at the Santa Fe Spreading Grounds.

The hydraulic properties of the aquifer sediments underlying the AISA have been measured in the area downgradient of the AISA by conducted aquifer tests on large capacity groundwater supply wells. The most reliable of these tests were conducted on groundwater extraction wells located approximately 1½ miles downgradient of the AISA, in the vicinity of the Valley County Water District Arrow/Lante Treatment Plant. These tests yielded average aquifer hydraulic conductivities from near field observations wells ranging from 275 to 452 feet per day (Geomatrix, 2005d). Effective porosities of the aquifer sediments are assumed to be comparable to specific yield estimates of 0.09 (unitless) based on the calibration of groundwater flow model of the San Gabriel Basin. Hydraulic gradients measured within the AISA range from 0.001 to 0.005 feet per foot as estimated from groundwater elevations measured within monitoring wells at the AISA. On the basis of these estimates of aquifer hydraulic properties and hydraulic gradients, groundwater flow velocities beneath the AISA are estimated to range from 3 to 25 feet per day.

Groundwater beneath the site flows to the southwest consistent with the regional groundwater flow gradient. Consequently, chemicals observed in groundwater beneath the site migrate downgradient via advective transport in groundwater at a rate equivalent to or less than the groundwater flow velocity. In accordance with the EPA CERCLA response action for the



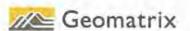
Baldwin Park Operable Unit (BPOU), this groundwater will be extracted and treated at the BPOU groundwater extraction and treatment facilities.

3.0 SUMMARY OF PREVIOUS INVESTIGATIONS

As described in the RAP, a comprehensive investigation of potential sources of perchlorate and other "emergent chemicals" was conducted in the AISA in two phases in 2000 and 2001. The results of this Emerging Chemicals Investigation (ECI) were presented in reports submitted to the LARWQCB on October 15, 2000 and April 30, 2001 (HLA, 2000 and HLA, 2001). The RAP included a site-specific evaluation of potential threats to groundwater quality that indicated only three of the possible source areas had the potential to impact groundwater at concentrations above 4 micrograms per liter (µg/l), the California Interim Action Level for perchlorate at the time the RAP was submitted.

Based on the ECI results and the evaluation presented in the RAP, five AOCs were identified within these three potential source areas. One of these AOCs (PE-1) was near Former Grinding Station 6 and three additional AOCs (PE-2, PE-3A, and PE-3B) were defined for the area associated with the Former Mixing Stations 8 and 9. The AOC designations were modified slightly (renaming AOCs PE-3A and PE-3B as PE-3 and PE-4, respectively) for the subsequent Work Plan and Addenda. The "PE" designation indicates the four AOCs are located on former PerkinElmer property. The fifth AOC is located at the Former Waste Treatment Facility, WT-2 (NG-1), located on Northrop Grumman (NG) property. Further assessment of AOC NG-1 is not addressed in this Report because soil excavation is not considered to be practicable and implementable at this location due to the extreme depth of contamination (greater than 200 feet below ground surface). The NG-1 AOC was addressed by a remedial action consisting of engineering controls to minimize potential migration of perchlorate to underlying groundwater as documented in a Construction Completion Report for this area issued in June 2005 (Geomatrix, 2005d).

Consequently, additional assessment activities were directed to areas where soil excavation has been identified as a practicable and implementable remedial alternative. That is, the areas previously identified as AOCs PE-1, PE-2, PE-3, and PE-4. Based on the findings described in this Report (a refined understanding of the distribution of perchlorate in soil) and our current understanding of the location of former Aerojet buildings (Figure 1-3), the AOCs designations have been replaced by the description of the former facility operations to describe the areas of perchlorate affected soil. Former Grinding Station 6 replaces AOC PE-1 whereas AOCs PE-2,



PE-3, and PE-4 are combined into one area representing the vicinity of the Former Mixing Stations 8 and 9. A description of the results of previous investigations for perchlorate in these areas is provided below.

3.1 FORMER GRINDING STATION 6

Former Grinding Station 6 is located on property currently owned by Proficiency and Dragonis and is located at the northeast corner of Building 2. During previous investigations, two soil borings were drilled to depths of 30 feet bgs to investigate for the occurrence and extent of perchlorate in soils in this area (Figure 1-3). Boring PSZB-06 was drilled to the west of the Former Grinding Station 6 just outside a landscaped area on the north side of Building 2 (Figure 1-3). Observed perchlorate concentrations were 3,000 and 120 µg/kg at depths of 5 and 10 feet, respectively. Perchlorate was not detected at depths greater than 10 feet or in an adjacent boring (PSZB-05) located approximately 50 feet to the east-northeast (Figure 1-3).

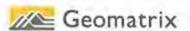
3.2 FORMER MIXING STATIONS 8 AND 9

This area is located on property currently owned by Proficiency and NG and extends east from Building 2 and to the north and south of Building 4. During previous investigations, two soil borings were drilled to depths of 30 feet bgs to investigate for the occurrence and extent of perchlorate in soils southwest of Former Mixing Station 8 (Figure 1-3). Observed perchlorate concentrations in PSZB-10 were 1,400 and 100 µg/kg at depths of 5 and 10 feet, respectively. No perchlorate was detected at depths greater than 10 feet or in the second boring (PSZB-09) located about 75 feet to the south (Figure 1-3).

Three borings were drilled near the Former Mixing Station 9, located between Buildings 3 and 4 (Figure 1-3). During previous investigations, four soil borings (PSZB-11, PSZB-12, PSZB-19 and PSZB-20) were drilled to depths of 27 to 30 feet bgs to investigate for the occurrence and extent of perchlorate in soils in this area (Figure 1-3). Observed perchlorate concentrations were 180 µg/kg at a depth of 5 feet in PSZB-11 and 100 µg/kg at a depth of 5 feet in PSZB-12. No perchlorate was detected at depths greater than 5 feet in either Boring PSZB-11 or PSZB-12.

4.0 WORK PLAN IMPLEMENTATION

Drilling and soil sampling for the implementation of the Work Plan and Work Plan Addendum was performed in two field mobilizations. The first mobilization began on March 21, 2005 and consisted of the drilling of 27 shallow zone boring locations with total depths ranging from 30



to 40 feet (PSZB-21 through PSZB-44, PSZB-46, PSZB-47, and PSZB-49). A total of 237 soil samples were collected and analyzed for perchlorate. The first mobilization was completed on April 1, 2005.

The second mobilization began on February 7, 2006 and consisted of the drilling of 26 shallow zone boring locations with total depths of 40 feet (PSZB-45, PSZB-48, PSZB-50 through PSZB-70, and PSZB-72); six intermediate locations with total depths of 100 feet (PIZB-01 through PIZB-06); and two near surface borings with total depths of 5 feet (PSZB-71 and PSZB-73). A total of 349 soil samples were collected and analyzed for perchlorate. The second mobilization was completed on March 7, 2006.

Both field mobilizations include similar scopes of work including:

- Pre-field activities,
- · drilling and soil sampling,
- equipment wash and investigative derived waste disposal,
- · sample handling and analysis, and
- surveying.

The methods used during this assessment, including pre-field activities, drilling, soil sampling, sample handling and analysis, surveying, equipment wash and investigative derived waste disposal are described in the following sections. Field activities for both mobilizations were performed in general conformance with each other except where specifically noted.

4.1 PRE-FIELD ACTIVITIES

The pre-field activities consisted of utility clearance, permitting, and preparation of a sitespecific Health and Safety Plan (HSP). Specifically these activities included:

- Retaining Sub Surface Surveys, a private underground utility locator from Solana Beach, California, to screen the planned drilling locations for potential underground utilities or buried objects;
- marking the drilling locations and notified Underground Services Alert (USA) of the planned subsurface assessment activities;
- obtaining an encroachment permit from the City of Azusa for borings located in the public right of way; and



updating the project-specific HSP. A field copy of the HSP was maintained at the
work site during all field activities. The HSP identified potential health and safety
hazards associated with the field activities, outline general safe work practices for
personnel at the site, define personal protective equipment requirements, and
described specific measures to be undertaken in case of an emergency.

4.2 DRILLING AND LITHOLOGIC LOGGING

Geomatrix contracted with Layne Christensen Company, a licensed (C-57) drilling company from Fontana, California, to advance twenty-seven borings, ranging in depth from 30 to 40 feet bgs between March and April 2005 (first phase). An additional twenty-four borings each to a depth of 40 feet bgs, six borings each to a depth of 100 feet bgs, and two borings each to depth of 5 feet bgs were advanced between February and March 2006 (second phase). During the second phase of characterization work Geomatrix contracted with BC² Environmental Corp., a licensed (C-57) drilling company from Fullerton, California, to air-knife twenty-four of the thirty-two boring locations each to a depth of 5 feet bgs. Air-knifing was done to ascertain that boring locations were free from subsurface utilities and/or obstructions prior to drilling. Drilling was performed on all shallow borings using dual-wall casing, air percussion, hammer drilling methods. This method uses a hammer on the drill rig to drive the casing. High pressure air is pushed down the outer casing annulus to the drill bit at the bottom of the boring and carries the cuttings out of the boring through the inner casing annulus to a cyclone separator.

One deep boring (PIZB-06) was drilled using an Air Rotary Casing Hamer (ARCH) methods. This method is similar to the dual wall percussion hammer but it uses a down-hole percussion hammer with a retractable drill bit, attached to an approximately 4-inch outside diameter (OD) drive pipe inserted through a threaded drive casing. Soil cuttings are forced to the surface by negative air pressure imparted on the drilled formation between the drive pipe and casing and flow through a cyclone separator. Groundwater was not encountered in any of the borings drilled. The borings were backfilled with bentonite chips using the drive casing as a tremie. The bentonite chips were hydrated with a continuous stream of potable water as the were placed. The surface at each boring location was patched with asphalt. A summary of the soil sampling activities is provided in the following subsections. Boring locations are shown on Figure 1-3. Soil logging activities were performed by a Geomatrix field geologist under the supervision of a California Professional Geologist. The lithology was described from the cuttings from the cyclone separator and classified in accordance with the United Soil Classification System (USCS) and recorded on a soil boring log for each soil boring. Visual



grain-size distribution, color, moisture content, and other pertinent characteristics were included on the soil boring log. Boring logs are provided in Appendix A.

4.3 SOIL SAMPLING

Soil samples for chemical analysis from each borehole were collected at depths of 1-, 2.5-, 5-, 7.5- and 10-foot depths and then at 5-foot intervals to 50 feet and 10-foot intervals from 50 feet to the completion depth of the borehole. Soil sampling was performed by a Geomatrix field geologist under the supervision of a California Professional Geologist.

In general, soil samples from the upper 1 to 2.5 feet of each soil boring were collected using either a hand trowel or by hand augering to ensure sample retrieval. Soil samples collected below 2.5 feet within the borehole were collected at the desired depths from the cyclone separator and placed in glass containers. Prior to sampling in the boring, the driller blew out the boring to clear any residual cuttings from the borehole prior to advancing to the sample depth. Soil sampling during the second phase of characterization work was similar to the first phase with the exception that soil samples collected from air knifed borings were sampled first for the 5-foot sample at the bottom of the boring using a hand auger and then the side walls of the air knifed boring were sampled for the 1 and 2.5-foot samples. If the bottom of the five foot boring could not be sampled with a hand auger, a 6-foot sample would be collected with the drilling equipment.

Depth-specific soil sampling from the remainder of each borehole was conducted directly from cyclone discharge on the drill rig after flushing the casing with air. As described in the Work Plan Addendum, soil samples were collected by placing a 5-gallon sample collection container directly below the cyclone discharge to capture the cuttings from the sample interval. Care was taken during the sample collection to minimize any loss of cuttings. Generally, advancing the casing 6 to 12 inches generated a sufficient volume of soil after which drilling is immediately stopped. The soil cuttings were then immediately placed into 4-ounce glass sample jars provided by the laboratory. Care was taken to ensure that the cuttings are homogenized to ensure that the soil sample is representative of the entire soil matrix. Typically, soil samples contained a mixture of coarse grained sand, gravel, broken cobble clasts, and finer grained soils. In instances when broken cobble clasts were too large to fit into the laboratory sample containers, the clasts were removed.



4.4 SAMPLE HANDLING AND ANALYSIS

Soil samples were collected and placed in 4-oz. glass jars, labeled, placed in sealable bags, and stored in a cooler with ice. All samples were handled and transported under Geomatrix chain-of-custody procedures and sent by lab courier to Del Mar Analytical Laboratories of Irvine, California for analysis by EPA Method 314.

4.5 SURVEYING

All borings were surveyed (vertical and horizontal) by Calvada Surveys, a licensed surveyor in the State of California, and referenced to mean sea level and the California State Plane Coordinate System. The survey was tied-in to the existing wells previously surveyed at the Site. The survey data are provided in Appendix B.

4.6 EQUIPMENT WASH AND INVESTIGATION DERIVED WASTE

All downhole drilling equipment was steam-cleaned prior to use and between soil boring locations. The driller set up a decontamination station south of Building 4 and allowed the wash water to pond on Visqueen plastic and evaporate. Between soil sampling intervals, the sampling equipment was washed with a detergent-water solution, rinsed with potable water and then rinsed again with deionized water.

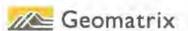
Soil cuttings and wastewater from decontamination activities generated during sampling activities were temporarily contained in roll-off bins. The roll-off bins were transported off site by Romic Environmental under direct contract with Aerojet.

5.0 FIELD ASSESSMENT RESULTS

This section summarizes the results of the data collection activities described in the Work Plan and Work Plan Addendum as conducted in March – April 2005 (first phase) and February – March 2006 (second phase). The following subsections describe lithologic logging, soil sampling results, an assessment of data quality, and an evaluation of the distribution of perchlorate in soils within the Study Area.

5.1 LITHOLOGIC LOGGING

Results of the lithologic logging indicated that, in general, the site is underlain by sediments comprised of zones of gravel, sand, and silt. Lithologic descriptions of soil and drill cuttings from the borings are presented on the boring logs in Appendix A. As expected given the depth



to groundwater within the AISA, saturated conditions were not encountered in any of the borings which extended to a maximum total depth of 100 feet bgs.

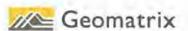
5.2 SOIL SAMPLING RESULTS

A description and analytical results for soil samples collected during the first and second phase characterization work is provided below. All soil samples submitted were analyzed for perchlorate using EPA Method 314. Soil sample analytical results from this and previous assessments in the Study Area are summarized in Table 5-1. The laboratory analytical reports and chain-of-custody forms for this assessment (Phase I and Phase II) are provided in Appendix C. Figure 5-1 shows a graphical representation of concentration of perchlorate in soil in depth zones for each boring using a series of color coded wedges. An oversized plate showing perchlorate concentrations in soil samples at each boring location is provided as Plate 1. A summary of findings from this assessment is summarized below by the areas with residual perchlorate in soil. Soil sampling results indicated that investigation results were best presented for two generalized areas within the Study Area, 1) the vicinity around Former Grinding Station 6, and 2) the area around Former Mixing Stations 8 and 9.

5.2.1 Former Grinding Station 6

This area is located near the northeast corner of existing Building 2. Perchlorate concentrations within this area ranged from 43 μg/kg to 66,000 μg/kg. The two highest concentrations of perchlorate (52,000 μg/kg and 66,000 μg/kg) in soil were reported in the samples collected from depths of 5 and 7.5 feet bgs in boring PSZB-23, which was located near the approximate northern edge of Former Grinding Station 6. Perchlorate concentrations exceeding 5,000 μg/kg were reported in soil samples from boring PSZB-24 (located at the southern part of Former Grinding Station 6) at a depth of 5 feet bgs, boring PSZB-36 (located approximately 40 feet north of the Former Grinding Station) at a depth of 2.5 feet, and boring PSZB-53 (located approximately 100 feet east-northeast of Former Grinding Station 6) at a depth of 2.5 feet bgs. No soil samples collected from borings in this area had reported concentrations greater than 5,000 μg/kg below 7.5 feet.

Two borings were drilled to 100 feet bgs in this area to evaluate the vertical extent of perchlorate in soil and were drilled adjacent to shallow borings where perchlorate had been detected in the deepest sample collected in the boring. PIZB-01 was drilled adjacent to PSZB-23; PIZB-02 was drilled adjacent to PSZB-24. Soil analytical results from PIZB-01 indicated perchlorate concentrations ranging from 2,100 µg/kg to 710 µg/kg in the interval of 35 to 100 feet bgs. Perchlorate concentrations in samples collected at depths of 90 and 100 feet



bgs in this boring were 990 μ g/kg and 880 μ g/kg, respectively. Soil analytical results from PIZB-02 indicated perchlorate concentrations ranging from 280 μ g/kg to non detect in the interval of 35 to 100 feet bgs. Perchlorate concentrations in samples collected at depths of 90 and 100 feet bgs in this boring were non detect and 88 μ g/kg, respectively.

The limits of the occurrence of perchlorate in the vicinity of Former Grinding Station 6 appear to be defined by soil sampling from borings to the north, west, and south. Building 2 bounds the southwestern part of this area and Building 3 bounds the eastern edge of this area. Boring PSZB-53/53A bounds the east northeastern edge of the area. The northern and northeastern occurrence of perchlorate detected in soil samples from boring PSZB-52 has not been clearly established.

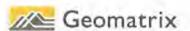
5.2.2 Former Mixing Stations 8 & 9

As described previously, soil sampling results for Former Mixing Stations 8 and 9 are presented together over an area that extends from approximately the southern property line of the parcel occupied by Building 3 to approximately 120 feet south of the property line between the parcel occupied by Building 4 and the Northrop Grumman property. On an east-west transect, the area extends from Building 2 on the west to approximately Aerojet Avenue on the east (Figure 5-1).

Perchlorate concentrations in this area ranged from 40 μ g/kg to 86,000 μ g/kg. Two soil samples with concentrations exceeding 50,000 μ g/kg perchlorate were reported: a concentration of 86,000 μ g/kg at a depth of 2.5 feet bgs in boring PSZB-29 (located approximately 140 feet south of Former Mixing Station 8; and at a concentration of 75,000 μ g/kg at a depth of 7.5 feet bgs in boring PSZB-32 (located between the northern and southern part of Former Mixing Station 9).

Perchlorate concentrations exceeding 5,000 μg/kg were reported in soil samples from boring PSZB-57 (located approximately at the southwestern part of the Former Mixing Station 8 at depths of 6 and 10 feet bgs, boring PSZB-49 (located approximately 120 feet south of Former Mixing Station 9) at a depth of 5 feet bgs, and boring PSZB-62 (located approximately 280 feet south-southeast of Former Mixing Station 8 and 280 feet south-southwest of Former Mixing Station 9) at a depth of 2.5 feet bgs.

With only one exception, no soil samples collected from borings at depths greater than 10 feet bgs in this area had reported perchlorate concentrations greater than 500 µg/kg. The one



exception was boring PSZB-46 (located approximately 30 feet northwest of Former Mixing Station 9/9B) which had concentrations of 1,800 μg/kg and 3,700 μg/kg at depths of 15 and 20 feet bgs, respectively.

Four borings were drilled to 100 feet bgs in this area to evaluate the vertical extent of perchlorate in soil. Two of the deeper borings were drilled north of Building 4 and in the vicinity of Former Mixing Station 9 (PIZB-05 and PIZB-06) and two 100 foot borings were drilled southwest and south of Building 4 (PIZB-03 and PIZB-04). PIZB-05 and PIZB-06 were drilled adjacent to or near shallow borings in which perchlorate had been detected in the bottom sample of the boring (e.g., PSZB-33, PSZB-46, and PSZB-47). PIZB-03 was drilled adjacent to PSZB-29, which indicated high concentrations of perchlorate in shallow soil; PIZB-04/04A was drilled adjacent to PSZB-31, which indicated a perchlorate concentration of 470 μg/kg at the bottom of the boring (30 feet bgs).

Soil analytical results from PIZB-05 indicated non detect for perchlorate from 40 to 100 feet bgs. PIZB-06 indicated non detect for perchlorate from 10 to 100 feet bgs. Soil analytical results for PIZB-03 indicated perchlorate concentrations ranging from 64 μ g/kg to 98 μ g/kg in soil at depth of 45 to 80 feet bgs and non detect in the soil samples from 90 and 100 feet bgs. Soil samples from PIZB-04/04A indicated concentrations ranging from 58 μ g/kg to 250 μ g/kg in the depth interval of 25 to 90 feet bgs. The soil sample collected from a depth of a 100 feet in this boring was non detect (< 40 μ g/kg).

The limits of the occurrence of perchlorate in this area appear to be defined by soil sampling from borings to the north, east, southeast, and southwest of Former Mixing Stations 8 and 9. Building 2 bounds the western part of this area. Soil sampling from borings located at the southern part of this area, extending onto Northrop Grumman property, suggests that perchlorate is limited to the upper to 5 to 10 feet of shallow soil at concentrations of $110 \mu g/kg$ or less.

5.3 DATA QUALITY ASSESSMENT

The field quality assurance (QA) program was in conformance with Geomatrix field protocols and standard laboratory QC procedures. Laboratory reports for precision, accuracy, and/or surrogate recovery, generated by Del Mar, are provided in the laboratory report in Appendix C. A discussion of the field and laboratory QA program is provided below.



Field QC

A sample of the rinsate of laboratory supplied distilled water poured over the steam cleaned drill casing was collected prior to drilling during each field mobilization. Two rinsate samples were collected during the first mobilization (sample identification "032105EB", and "032505EB") were collected on March 21 and March 25, 2005, respectively. The rinsate sample collected during the second mobilization (sample identification "20060207EQB") was collected on February 7, 2006. Analyses of these samples for perchlorate did not indicate the presence of this constituent in the rinsate samples above the laboratory reporting limit of 3 µg/l (Table 5-2). Laboratory analytical reports of the equipment rinse samples are provided in Appendix C.

Laboratory QA

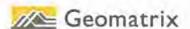
The laboratory QA program included data package completeness, laboratory case narrative, chain-of-custody forms, analytical method holding time requirements, and an evaluation of surrogate recoveries, reagent and matrix spikes, matrix spike duplicates, and laboratory control samples (LCS). The QA program also consists of data validation performed by a qualified chemist in accordance with U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, EPA/540/R-99/008 (U.S. EPA, 2002). This review included checking QC values provided on the laboratory QC forms to the method QC criteria.

All laboratory QC criteria were within acceptable limits with the following exception:

 The laboratory indicated a raised reporting limit (200 μg/kg) for soil sample PSZB-69-1 due to sample matrix effects.

5.4 DISTRIBUTION OF PERCHLORATE IN SOILS

Soil sampling results were further evaluated using three-dimensional geospatial modeling program, EarthVision® to develop a better understanding of the lateral and vertical extent of observed perchlorate concentrations. Soil sampling results at each borehole location and discrete sampling depth were input into the EarthVision® software for interpolation of perchlorate concentrations between sample locations using the 3D minimum tension gridding technique. The minimum tension gridding algorithms calculate a smooth surface that closely fits the input data values using biharmonic-cubic spline techniques. This procedure produces a three-dimensional grid depicting the interpolated distribution of chemical concentrations throughout the defined volume. The technique is designed to match data where it exists, to



smoothly interpolate between known data points, and to extrapolate where there is no data using a splining technique to develop a smooth surface with a minimum curvature.

Following the development of a three-dimensional representation of the distribution of residual perchlorate in soils using the EarthVision® software, various prospectives of the lateral and vertical extent of perchlorate were evaluated. Interpolated perchlorate concentrations at depth intervals of 0 to 20 feet, 20 to 40 feet, and greater than 40 feet bgs are shown in plan view on Figures 5-2, 5-3, and 5-4. Each of these figures includes a three dimensional oblique angle view of the interpolated perchlorate distribution in lower left-hand corner of the figure. In addition, cross sections showing the vertical extent of perchlorate along three cross-section alignments (A-A', B-B', and C-C' section line alignments shown on Figure 5-5) through the Study Area are shown on Figure 5-6.

The evaluation of soil sampling results including the three-dimensional interpolation of the perchlorate concentrations using the EarthVision® software resulted in the following general conclusions regarding the lateral and vertical extent of perchlorate in the Study Area:

- The lateral extent of perchlorate in the Study Area has been characterized to concentrations of 40 μg/kg or less. There are two minor exceptions where concentrations above 40 μg/mg have not been completely bounded: 1) the area north of the northwestern corner of Building 3; and 2) the area south of Building 4.
- The vertical extent of perchlorate in the Study Area has been characterized to concentrations of 40 µg/kg or less and depths of less than 20 feet. There are two minor exceptions; 1) the area near the northeast corner of Building 2, and 2) the area south of Building 4.
- Five areas of highest perchlorate concentrations ("hot spots") were observed in the upper 20 feet in the Study Area. These "hot spots" are located near: 1) the northeast corner of Building 2; 2) the northeast corner of Building 4; 3) a very localized area near the northwest corner of Building 4; 4) a localized area southwest of the southwest corner of Building 4; and 5) a localized area south of the southern wall of Building 4. These "hot spot" locations are generally consistent with the current understanding of the former locations of Former Grinding Station 6, Former Mixing Station 8, and Former Mixing Station 9.

6.0 DEVELOPMENT OF SOIL SCREENING LEVELS

This section describes the development of SSLs for the shallow vadose zone, as requested by the LARWQCB in their letter of November 12, 2004. The LARWQCB indicated that a SSL cleanup level be developed that is protective of the underlying groundwater from further impact



by residual perchlorate in the shallow unsaturated zone. The LARWQCB also indicated that the development of an SSL should consider important parameters such as dry bulk density, permeability, porosity, saturated vadose zone hydraulic conductivity, aquifer hydraulic conductivity, and total organic carbon content in the development of the SSL. Further, the LARWQCB stated that the development of the SSL should consider uncertainties associated with various interdependent assumptions by conducting sensitivity and uncertainty analyses to allow for an understanding of the cumulative effect of uncertainty in the development of the SSL. In consideration of the LARWQCB guidance, an approach was formulated for the development of the SSL that utilized available site data to develop a conceptual model of perchlorate migration in the vadose zone and a numerical model of soil moisture movement and perchlorate migration to predict impacts to groundwater under various land use scenarios. Model input parameters were then systematically adjusted to assess model sensitivity to changes in key variables and evaluate uncertainty in the model results relative to the development of the SSL. It should be noted that the perchlorate SSL developed in this report is intended to be used as a preliminary soil screening level to guide characterization and remediation planning activities relative to the protection of groundwater. The perchlorate SSL is not intended to be used a remediation or cleanup goal for impacted soils because remediation or cleanup goals need to consider other factors such as existing land use, future land use, effectiveness, implementability, and cost.

The approach for the development of the SSL presented in this report focuses on the development of appropriate screening levels for residual perchlorate in the upper 20 feet of the vadose zone that are protective of underlying groundwater. The development of the SSL for only upper 20 feet of vadose zone is considered appropriate because: 1) the highest concentrations of residual perchlorate are observed in the upper 20 feet of the vadose zone within the Study Area, and 2) 20 feet is considered the maximum practical depth for the remediation of soils containing perchlorate through excavation and disposal or ex-situ treatment (Alternatives C and D in the RAP). As stated in prior correspondence with the LARWQCB including a technical meeting with the LARWQCB on June 5, 2003, no practical removal or treatment alternative exists for the deeper zone of perchlorate contamination within the AISA. In addition, the injection of fluids necessary for alternative treatment technologies poses an increased threat to groundwater quality due to the high probability of flushing perchlorate to underlying groundwater. At the time the RAP was prepared, as well as today, Aerojet is unaware of other technically viable alternatives for dealing with low concentrations of perchlorate in the vadose zone at depth.



As described in the 2nd Addendum to the RAP, the maintenance of a relatively impermeable cap over areas of residual perchlorate, combined with other institutional controls, is the most appropriate means of eliminating potential threats to human health and groundwater associated with the occurrence of perchlorate in the vadose zone within the AISA. As demonstrated in the RAP, the installation of a relatively impermeable cap eliminates the need to apply a SSL because the soils containing perchlorate would be left in place and functionally isolated from both human exposure and groundwater. However to further demonstrate the effectiveness of the impermeable capping alternative, it is included with the evaluation of other land use scenarios in the development of a SSL described below. The following sections of this report describe the conceptual model of perchlorate migration in the vadose zone within the Study Area and the numerical modeling of potential perchlorate impacts to groundwater for the selection of a perchlorate SSL for the upper 20 feet of vadose zone within the Study Area.

6.1 CONCEPTUAL MODEL OF PERCHLORATE MIGRATION IN THE VADOSE ZONE

The conceptual model of perchlorate migration in the vadose zone described in this section is based on soil physical property measurements, perchlorate soil sampling results, lithologic logging, and other field observations made over the last 13 years of site characterization activities within the AISA. Ammonium perchlorate and potassium perchlorate are solid non-volatile compounds that combine the perchlorate anion (ClO₄) with cations, typically either ammonium (NH₄⁺) or potassium (K⁺) cations. When either of these salts is dissolved in water the cations and anions are released and become hydrolyzed. Perchlorate salts, including ammonium and potassium perchlorate, are very soluble. For example, ammonium perchlorate has a water solubility of 106 grams/liter (g/l) and potassium perchlorate 7.5 g/l at 0°C, and the solubility increases rapidly with temperature. As long as there is enough water to dissolve the perchlorate salts, perchlorate will be mobile in the free anion form and is very stable.

Due to the non-volatile and high solubility of perchlorate salts, the amount of water present in unsaturated soils and its movement as liquid soil moisture (pore water) is fundamental to the understanding of perchlorate migration in the vadose zone. Pore water in vadose zone sediments moves downward in a response to a total head gradient. The total head gradient consists of the pressure head (capillary pressure) and the elevation head (gravitational forces). Capillary pressures are negative pressures that work against gravitational forces to hold pore water by capillary tension in the soil pore space. Consequently, soil moisture (pore water) only moves downward when the elevation head (gravitational forces) exceed the pressure head (capillary pressure). This typically occurs when infiltration of water increases the soil moisture content to a level where the downward gravitational forces exceed and overcome the capillary



tension. Consequently, measurements of soil moisture content are important in understanding the potential for downward pore water movement in the vadose zone.

Laboratory testing for physical soil properties (including bulk density, porosity, moisture content, and organic carbon content) was conducted on soil samples collected from the upper 100 feet of vadose zone during the Phase I and II Emerging Chemicals Investigations in the AISA described in Section 3.0 above. These physical soil testing results are summarized in Table 6-1. Lithologic descriptions for these samples based on grain-size distribution testing ranged from medium sand to gravel consistent with most samples defined as coarse sand. These lithologic descriptions are consistent with lithologic logging of numerous boreholes at within the AISA. Laboratory testing results indicated soil moisture contents ranging from less than 2 percent to a maximum of about 13 percent (by volume) in one sample. The average soil moisture content was less than 5 percent (by volume). These relatively low soil moisture contents are typical of published literature values for medium sand, coarse sand, and gravel sediments in arid environments (e.g., limited precipitation and deep percolation). The relatively low soil moisture contents observed within the upper 100 feet of the vadose zone at the AISA suggest that the vadose zone is receiving very limited amounts, if any, of infiltration from precipitation or other sources. This observation is consistent with the majority of the AISA being covered by buildings or pavement materials.

Another important consideration in understanding the migration of perchlorate in the vadose zone is the vertical distribution of perchlorate as observed in soil sampling results. As described above, the migration of perchlorate is completely dependant on the movement of pore water through the vadose zone. Consequently, the occurrence of perchlorate in soil samples collected at various depths can be used as an indicator or tracer of pore water movement. For example, if pore water was moving readily downward through soils containing residual perchlorate, it would be expected that perchlorate would be found throughout the entire thickness of the vadose zone to the underlying groundwater. As described in Section 5.4, soil sampling results in the Study Area indicated that the majority of the perchlorate is limited to the upper 20 feet of the vadose zone. This indicates that the existing buildings and pavement materials are effectively restricting infiltration and limiting the downward migration of perchlorate over the majority of the Study Area. Perchlorate is observed to depths as great as 90 to 100 feet bgs in two localized areas within the Study Area indicating that localized infiltration and downward pore water movement may have occurred in these areas in the past. This localized infiltration may be the result of past operational practices that involved discharge of water to ground surface or the ponding and infiltration of precipitation and surface water



runoff in these areas prior to the placement of the asphaltic concrete pavement that that coverts the site currently.

6.2 NUMERICAL MODELING OF POTENTIAL IMPACTS TO GROUNDWATER

This section presents the numerical modeling of potential impacts of residual perchlorate in the upper 20 feet of the vadose zone on underlying groundwater quality. Potential migration of residual perchlorate concentrations in the upper 20 feet of the vadose zone were simulated using a variably-saturated flow and solute transport model, VS2DT, developed by the United States Geological Survey (Lappala, et al., 1983 and Healy, 1990). The VS2DT model is an improvement over the EPA VLEACH model used for the previous assessment of groundwater impacts provided in the RAP (Geomatrix, 2002). This improvement relates to the ability of VS2DT model to simulate both water flow and perchlorate transport in both the vadose zone and underlying groundwater. As a result, the VS2DT model to capable of explicitly simulating perchlorate migration within the vadose zone and the underlying groundwater aquifer as a coupled system thus allowing for the direct prediction of perchlorate groundwater concentrations at a Point of Compliance (POC) located at the site boundary.

6.2.1 VS2DT Model Construction

The VS2DT model constructed for the development of the perchlorate SSL consists of a twodimensional model domain oriented in cross section along a groundwater flow extending through the Study Area. VS2DT utilizes finite difference numerical methods to solve the Richard's equation for variably-saturated flow and the advection-dispersion equation for solute transport. The cross sectional model domain is discretized into 60 rows and 90 columns comprising a grid of 5,400 cells extending from groundwater surface to approximately 50 feet below the water table (Figure 6-1). For the purposes of this model, the depth to the water table was assumed to be fixed at an approximate depth of 250 feet below ground surface with a uniform hydraulic gradient of 0.0027 feet per foot across the saturated portion of the model domain to allow simulation of groundwater flow.

6.2.2 Model Input Parameters

Input parameters to the VS2DT model are based on site-specific data collected during various characterization activities conducted within the AISA and the Baldwin Park Operable Unit over the past 13 years. A summary of model input parameters are provided in Table 6-2. Model input parameters representing soil properties for the vadose zone were primarily based on physical laboratory test results from soil samples collected during the Phase I and II Emerging Chemicals Investigations as described in Section 6.1 and presented on Table 6-1. These



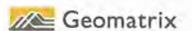
physical soil properties data were used to generate site-specific van Genuchten equation parameters that define the relationship between moisture content, capillary pressure, and unsaturated hydraulic conductivity (i.e., soil characteristic functions) in unsaturated sediments in the VS2DT model. Initial moisture content conditions were assigned based on the average moisture content (approximately 5 percent by volume) observed within the AISA (Table 6-1). Estimates of saturated hydraulic conductivity are generally based on long-term aquifer testing results of large-capacity extraction wells in the Baldwin Park Operable Unit. Estimates of infiltration and deep percolation through the vadose zone (groundwater recharge) are based on regional studies conducted by the San Gabriel Basin (CDWR, 1966) and groundwater modeling studies in the San Gabriel Basin (Geomatrix, 2005c). Other model input parameters such as longitudinal and transverse dispersivity are based on published literature values.

Two source areas were defined in the VSDT model to represent residual perchlorate sources in the vadose zone associated with the Former Grinding Station 6 and the Former Mixing Stations 8 and 9 to a depth of 20 feet. The upgradient source area representing Former Grinding Station 6 was assigned a source length of 100 feet whereas the downgradient source area representing Former Mixing Stations 8 and 9 was assigned a source length of 180 feet. These source lengths are based on the approximate length of the area of elevated perchlorate concentrations observed along a groundwater flow path, extending from northeast to the southwest through the Study Area. Sources were not assigned a width dimension in the model because the model is of a unit thickness given its two-dimensional cross sectional construct. Source areas were assigned an arbitrary relative perchlorate concentration in water to allow prediction of relative concentrations at the POC located at the site boundary (Figure 6-1).

6.2.3 Predicted Impacts to Groundwater

The VS2DT model was utilized to simulate potential impacts to groundwater from residual perchlorate concentrations for the following two future land use scenarios. These future land use scenarios are consistent with those evaluated in the RAP using the VLEACH model.

- No infiltration In this future land use scenario, residual perchlorate concentrations in soil are covered and remain covered by impermeable pavement. As a result, no infiltration or downward percolation of water occurs through the residual perchlorate concentrations in soil.
- Infiltration of precipitation In this future land use scenario, residual perchlorate concentrations in soil are exposed to naturally occurring precipitation and infiltration (pavement is removed with the ground surface exposed). Approximately 15 percent (3 inches per year) of the annual average precipitation (20 inches per



year) is allowed to infiltrate and percolate downward through the vadose zone. This estimated infiltration rate is based on groundwater modeling studies in the San Gabriel Basin that consider precipitation rates, surface runoff, and evapotranspiration rates. Infiltrating precipitation percolates downward through the residual perchlorate concentrations resulting in leaching and migration of perchlorate towards the water table.

Following the simulation of each of the future land use scenarios described above, using relative source concentrations as described in Section 5.2, the resultant predicted concentrations were used to estimate the soil concentration for perchlorate in the upper 20 feet of the vadose zone that would be equivalent to a groundwater concentration of 6 μ g/l at the POC located at the site boundary as described in Section 6.2.2. The 6 μ g/l threshold concentration for this evaluation is based on the State of California Public Health Goal for perchlorate in drinking water.

Predicted perchlorate concentrations in groundwater at the POC located at the site boundary are shown on Figures 6-2 and 6-3 for each of two land use scenarios described above. The soil concentration for perchlorate that is equivalent to a groundwater perchlorate concentration of 6 µg/l at the site boundary is also shown on these figures. For the no infiltration land use scenario, the simulated perchlorate concentrations were effectively zero for the entire duration of the simulation and therefore no predicted perchlorate concentrations are shown on Figure 6-2. This result is consistent with the concentrations previously predicted using the VLEACH model in the RAP (Geomatrix 2002a). Simulated perchlorate concentrations for the infiltration of precipitation scenario shown on Figure 6-3 indicate that the peak concentrations are predicted to occur at the POC located at the site boundary after approximately 80 years. This demonstrates the very slow migration of perchlorate through the vadose zone under conditions consistent with the infiltration of normal precipitation.

6.2.4 Model Sensitivity and Uncertainty Analyses

The sensitivity of the VS2DT modeling results was evaluated by systematically adjusting various input parameters from the base case model input parameters listed in Table 6-2, to assess the change in soil perchlorate concentrations in the upper 20 feet of the vadose zone that would be equivalent to a groundwater concentration of 6 µg/l at the site boundary. The base case model input parameters presented in Table 6-2 are generally based on average or median values within a range of measured values. Consequently, the base case input parameters are considered to be the most representative of the site conditions being simulated. Sensitivity analyses typically adjust various input parameters from the base case parameters within the



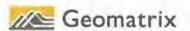
range of measured or reported values for the various input parameters. This approach not only allows for the assessment of the sensitivity of the model to changes in input parameters but also allows for an assessment of the effect that parameter uncertainties have on model results.

A tabulation of the various sensitivity simulations conducted for the VS2DT model described above is provided in Table 6-3. Sensitivity simulations were performed using the base case input parameters presented in Table 6-2 and infiltration rates associated with the infiltration of precipitation land use scenario described above. As stated above, adjustments to the various input parameters reflect uncertainties in the measured or reported values for the various model input parameters. Based on this evaluation, it was determined the VS2DT model is most sensitive to changes in saturated hydraulic conductivity, porosity, and infiltration rates. Conversely, the model was determined to be least sensitive to changes in residual moisture content, initial moisture content, and changes in longitudinal and transverse dispersivity values. The results of various model sensitivity simulations indicated that adjustments to the various input parameters over the range of measured or expected values resulted in simulated soil perchlorate concentrations ranging from 1,000 to 1,641 µg/kg in the upper 20 feet of the vadose zone that were equivalent to 6 μg/l in groundwater at the site boundary. By comparison, soil perchlorate concentrations of 1,302 µg/kg were predicted using the base case model input parameters. Consequently, the range of predicted soil concentrations of 1,000 to 1,641 µg/kg demonstrates the variability in model results associated with the uncertainties in measured or reported values for the various model input parameters.

6.2.5 Proposed SSL for Perchlorate

The approach for the development of the SSL presented in this report focuses on the development of appropriate screening level for residual perchlorate in the upper 20 feet of the vadose zone that is protective of groundwater. Development of the SSL for only the upper 20 feet of vadose zone is considered appropriate because: 1) the highest concentrations of residual perchlorate are observed in the upper 20 feet of the vadose zone within the Study Area, 2) most of the residual perchlorate mass resides in the upper 20 feet of the vadose zone, and 3) 20 feet is considered the maximum practical depth for the remediation of soils containing perchlorate through excavation and ex-situ treatment. As stated in Section 6.0, no practical removal or treatment alternative exists for the deeper areas of perchlorate contamination within the AISA.

As demonstrated by the VS2DT modeling in this report and previous modeling efforts presented in the RAP, the installation of a relatively impermeable cap eliminates the need to apply a SSL because the soils containing residual perchlorate would be left in place and



functionally isolated from both human exposure and groundwater. However to evaluate other potential land use scenarios where existing buildings and pavement may be removed, VS2DT simulations were performed to assess potential impacts to groundwater associated with perchlorate in the upper 20 feet of the vadose zone. These simulations indicated that perchlorate concentrations below about 1,300 μ g/kg in the upper 20 feet of the vadose zone pose no threat to groundwater quality at the site boundary under a future land use that allows infiltration of naturally occurring rainfall. In consideration of these results and uncertainties in model input parameters described in Section 6.2.4, it is proposed that a SSL of 1,000 μ g/kg be adopted for the upper 20 feet of the vadose zone assuming land use restrictions that preclude landscape irrigation. Given that it has been demonstrated in this report that a perchlorate concentration of 1,300 μ g/kg in the upper 20 feet of the vadose zone poses no threat to groundwater quality at the site boundary, a SSL of 1,000 μ g/kg provides an adequate safety factor to address uncertainties associated with model predictions and future land use.

7.0 CONCLUSIONS AND RECOMMENDATIONS

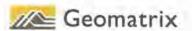
This report presents the findings of the further assessment of soils, in the Study Area, containing residual concentrations of perchlorate. This report also presents the development of a perchlorate SSL for the shallow vadose zone (upper 20 feet) that is protective of underlying groundwater. Conclusions regarding the further assessment of soils are as follows:

- The lateral extent of perchlorate in the Study Area has been characterized to concentrations of 40 μg/kg or less. There are two minor exceptions where concentrations above 40 ug/mg have not been completely bounded: 1) the area north of the northwestern corner of Building 3; and 2) the area south of Building 4.
- The vertical extent of perchlorate in the Study Area has been characterized to concentrations of 40 µg/kg or less and depths of less than 20 feet. There are two minor exceptions; 1) the area near the northeast corner of Building 2, and 2) the area south of Building 4.
- Five areas of highest perchlorate concentrations ("hot spots") were observed in the upper 20 feet in the Study Area. These "hot spots" are located near; 1) the northeast corner of Building 2; 2) the northeast corner of Building 4; 3) a very localized area near the northwest corner of Building 4; 4) a localized area southwest of the southwest corner of Building 4; and 5) a localized area south of the southern wall of Building 4. These "hot spot" locations are generally consistent with the current understanding of the former locations of Former Grinding Station 6, Former Mixing Station 8, and Former Mixing Station 9.



Conclusions and recommendations regarding the development of a SSL for perchlorate are follows:

- As demonstrated by analyses presented in this report and previous analyses presented in the RAP, the installation and maintenance of a relatively impermeable cap eliminates the need to apply a SSL, because soils containing residual perchlorate would be left in place, but functionally isolated from both human exposure and groundwater. Consequently, capping with institutional controls remains the most effective, implementable, and economical remedy for soils containing residual concentrations of perchlorate. This conclusion is consistent with the RAP, RAP addenda, and subsequent correspondence with the LARWQCB. As a result, capping with institutional controls remains the recommended remedial alternative for soils containing residual perchlorate in the Study Area.
- The development of the SSL for the upper 20 feet of vadose zone is considered appropriate because: 1) the highest concentrations of residual perchlorate are observed in the upper 20 feet of the vadose zone within the Study Area, 2) most of the mass of perchlorate remaining in soil is contained in the upper 20 feet, and 3) 20 feet would essentially be considered the maximum practical depth for remediation of soils containing perchlorate through excavation and ex-situ treatment. No practical removal or treatment alternative exists for the deeper areas of perchlorate contamination within the AISA.
- Given that it has been demonstrated in this report that a perchlorate concentration of 1,300 µg/kg in the upper 20 feet of the vadose zone poses no threat to groundwater quality at the site boundary, a SSL of 1,000 µg/kg provides an adequate margin of safety to address uncertainties associated with model predictions and future land use restrictions. Consequently, it is recommended that a perchlorate SSL of 1,000 µg/kg be adopted for the upper 20 feet of soils containing residual concentrations of perchlorate.
- The SSL for perchlorate in the shallow vadose zone developed in this report is intended to be used as a preliminary soil screening level, to guide characterization and remediation planning activities relative to the protection of groundwater. The perchlorate SSL is not intended to be used directly as a remediation or cleanup goal for soils containing residual concentrations of perchlorate because remediation or cleanup goals need to consider other factors such as existing land use, future land use, effectiveness, implementability, and cost.



8.0 REFERENCES

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TABLES



SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

AZUSA / IRWINDALE STUDY AREA

Azusa and Irwindale, California

Results reported in micrograms per kilogram (mg/kg)

Boring ID	Sample Date	Sample Depth (feet	EPA Method 314.0 MOI
		bgs)	Perchlorate
PIZB-01	2/27/2006	35	940
PIZB-01	2/27/2006	40	2100
PIZB-01	2/27/2006	45	1700
PIZB-01	2/27/2006	50	970
PIZB-01	2/27/2006	60	880
PIZB-01	2/27/2006	70	710
PIZB-01	2/27/2006	80	1300
PIZB-01	2/27/2006	90	990
PIZB-01	2/27/2006	100	880
PIZB-02	2/28/2006	35	42
PIZB-02	2/28/2006	40	87
PIZB-02	2/28/2006	45	41
PIZB-02	2/28/2006	50	100
PIZB-02	2/28/2006	60	280
PIZB-02	2/28/2006	70	$ND (<40)^2$
PIZB-02	2/28/2006	80	88
PIZB-02	2/28/2006	90	ND (<40) ²
PIZB-02	2/28/2006	100	55
PIZB-03	3/1/06	35	140
PIZB-03	3/1/06	40	ND (<40)
PIZB-03	3/1/06	45	98
PIZB-03	3/1/06	50	98
PIZB-03	3/1/06	60	79
PIZB-03	3/1/06	70	64
PIZB-03	3/1/06	80	73
PIZB-03	3/1/06	90	ND (<40)
PIZB-03	3/1/06	100	ND (<40)
PIZB-04	2/7/06	1	ND (<40)
PIZB-04	2/7/06	2.5	ND (<40)
PIZB-04	2/7/06	5	44
PIZB-04	2/7/06	7.5	ND (<40)
PIZB-04	2/7/06	10	ND (<40)
PIZB-04	2/7/06	15	ND (<40)
PIZB-04	2/7/06	20	ND (<40)
PIZB-04	2/7/06	25	72
PIZB-04	2/7/06	30	250
PIZB-04	2/7/06	35	150
PIZB-04	2/7/06	40	76
PIZB-04	2/7/06	45	190
PIZB-04	2/7/06	50	220
PIZB-04A	3/1/06	60	120
PIZB-04A	3/1/06	70	110



TABLE 5-1

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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

AZUSA / IRWINDALE STUDY AREA

Azusa and Irwindale, California

Results reported in micrograms per kilogram (µg/kg)

Boring ID	Sample Date	Sample Depth (feet	EPA Method 314.0 MOI
		bgs)	Perchlorate
PIZB-01	2/27/2006	35	940
PIZB-01	2/27/2006	40	2100
PIZB-01	2/27/2006	45	1700
PIZB-01	2/27/2006	50	970
PIZB-01	2/27/2006	60	880
PIZB-01	2/27/2006	70	710
PIZB-01	2/27/2006	80	1300
PIZB-01	2/27/2006	90	990
PIZB-01	2/27/2006	100	880
PIZB-02	2/28/2006	35	42
PIZB-02	2/28/2006	40	87
PIZB-02	2/28/2006	45	41
PIZB-02	2/28/2006	50	100
PIZB-02	2/28/2006	60	280
PIZB-02	2/28/2006	70	$ND (<40)^2$
PIZB-02	2/28/2006	80	88
PIZB-02	2/28/2006	90	ND (<40) ²
PIZB-02	2/28/2006	100	55
PIZB-03	3/1/06	35	140
PIZB-03	3/1/06	40	ND (<40)
PIZB-03	3/1/06	45	98
PIZB-03	3/1/06	50	98
PIZB-03	3/1/06	60	79
PIZB-03	3/1/06	70	64
PIZB-03	3/1/06	80	73
PIZB-03	3/1/06	90	ND (<40)
PIZB-03	3/1/06	100	ND (<40)
PIZB-04	2/7/06	1	ND (<40)
PIZB-04	2/7/06	2.5	ND (<40)
PIZB-04	2/7/06	5	44
PIZB-04	2/7/06	7.5	ND (<40)
PIZB-04	2/7/06	10	ND (<40)
PIZB-04	2/7/06	15	ND (<40)
PIZB-04	2/7/06	20	ND (<40)
PIZB-04	2/7/06	25	72
PIZB-04	2/7/06	30	250
PIZB-04	2/7/06	35	150
PIZB-04	2/7/06	40	76
PIZB-04	2/7/06	45	190
PIZB-04	2/7/06	50	220
PIZB-04A	3/1/06	60	120
PIZB-04A	3/1/06	70	110



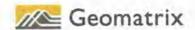
TABLE 5-1

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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Results reported in micrograms per kilogram (µg/kg)

Boring ID	Sample Date	Sample Depth (feet bgs)	EPA Method 314.0 MOI Perchlorate
Boring ID			
PIZB-04A	3/1/06	80	100
PIZB-04A	3/1/06	90	58
PIZB-04A	3/1/06	100	ND (<40)
PIZB-05	2/22/06	1	290
PIZB-05	2/22/06	2.5	320
PIZB-05	2/22/06	5	83
PIZB-05	2/24/06	7.5	60
PIZB-05	2/24/06	10	65
PIZB-05	2/24/06	15	ND (<40)
PIZB-05	2/24/06	20	65
PIZB-05	2/24/06	25	120
PIZB-05	2/24/06	30	75
PIZB-05	2/24/06	35	64
PIZB-05	2/24/06	40	ND (<40)
PIZB-05	2/24/06	45	ND (<40)
PIZB-05	2/24/06	50	ND (<40)
PIZB-05	2/24/06	60	ND (<40)
PIZB-05	2/24/06	70	ND (<40)
PIZB-05	2/24/06	80	ND (<40)
PIZB-05	2/24/06	90	ND (<40)
PIZB-05	2/24/06	100	ND (<40)
PIZB-06	2/22/06	1	420
PIZB-06	2/22/06	2,5	1,200
PIZB-06	2/22/06	5	300
PIZB-06	2/22/06	7.5	40
PIZB-06	2/22/06	10	ND (<40)
PIZB-06	2/22/06	15	ND (<40)
PIZB-06	2/22/06	20	ND (<40)
PIZB-06	2/22/06	25	ND (<40)
PIZB-06	2/22/06	30	ND (<40)
PIZB-06	2/22/06	35	ND (<40)
PIZB-06	2/22/06	40	ND (<40)
PIZB-06	2/22/06	45	ND (<40)
PIZB-06	2/22/06	50	ND (<40)
PIZB-06	2/23/06	60	ND (<40)
PIZB-06	2/23/06	70	ND (<40)
PIZB-06	2/23/06	80	ND (<40)
PIZB-06	2/23/06	90	ND (<40)
PIZB-06	2/23/06	100	ND (<40)
PSZB-05	3/16/2001	100	ND (<40)
			80 20 7 7 7 7 7
PSZB-05	3/16/2001	20	ND (<40)
PSZB-05	3/16/2001	30	ND (<40)
PSZB-05	3/16/2001	5	ND (<40) ²
PSZB-06	3/16/2001	5	3,000
PSZB-06	3/16/2001	10	120
PSZB-06	3/16/2001	20	ND (<40)



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Boring ID	Sample Date	Sample Depth (feet	EPA Method 314.0 MOI
		bgs)	Perchlorate
PSZB-06	3/16/2001	30	ND (<40)
PSZB-9	3/9/01	5	ND (<40)
PSZB-9	3/9/01	10	ND (<40)
PSZB-9	3/9/01	20	ND (<40)
PSZB-9	3/9/01	27	ND (<40)
PSZB-10	3/9/01	5	1,400
PSZB-10	3/9/01	10	100
PSZB-10	3/9/01	20	ND (<40)
PSZB-10	3/9/01	27	ND (<40)
PSZB-11	3/17/01	5	180
PSZB-11	3/17/01	10	ND (<40)
PSZB-11	3/17/01	20	ND (<40)
PSZB-11	3/17/01	30	ND (<40)
PSZB-12	3/9/01	5	100
PSZB-12	3/9/01	10	ND (<40)
PSZB-12	3/9/01	20	ND (<40)
PSZB-12	3/9/01	30	ND (<40)
PSZB-19	3/8/01	5	ND (<40)
PSZB-19	3/8/01	10	ND (<40)
PSZB-19	3/8/01	20	ND (<40)
PSZB-19	3/8/01	27	ND (<40)
PSZB-20	3/9/01	5	ND (<40)
PSZB-20	3/9/01	10	ND (<40)
PSZB-20	3/9/01	20	ND (<40)
PSZB-20	3/9/01	27	ND (<40)
PSZB-21	3/21/05	1	ND (<40)
PSZB-21	3/21/05	2.5	ND (<40)
PSZB-21	3/21/05	5	ND (<40)
PSZB-21	3/21/05	7.5	ND (<40)
PSZB-21	3/21/05	10	ND (<40)
PSZB-21	3/21/05	15	ND (<40)
PSZB-21	3/21/05	20	ND (<40)
PSZB-21	3/21/05	25	ND (<40)
PSZB-21	3/21/05	30	ND (<40)
PSZB-22	3/21/05	1	ND (<40)
PSZB-22	3/21/05	2.5	ND (<40)
PSZB-22	3/21/05	5	ND (<40)
PSZB-22	3/21/05	7.5	ND (<40)
PSZB-22	3/21/05	10	ND (<40)
PSZB-22	3/21/05	15	ND (<40)
PSZB-22	3/21/05	20	ND (<40)
PSZB-22	3/21/05	25	3
PSZB-22	3/21/05	30	ND (<40)
PSZB-23	3/21/05	1	ND (<40)
PSZB-23	3/21/05	2,5	420
PSZB-23	3/21/05	5.5	52,000



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Boring ID	Sample Date	Sample Depth (feet bgs)	EPA Method 314.0 MOI
Boring ID			Perchlorate
PSZB-23	3/21/05	7.5	66,000
PSZB-23	3/21/05	10	
PSZB-23	3/21/05	15	1,600
PSZB-23	3/21/05	20	580
PSZB-23	3/21/05	25	1,400
PSZB-23	3/21/05	30	
PSZB-24	3/22/05	1	ND (<40)
PSZB-24	3/22/05	2.5	86
PSZB-24	3/22/05	5	14,000
PSZB-24	3/22/05	10	ND (<40)
PSZB-24	3/22/05	15	43
PSZB-24	3/22/05	20	ND (<40)
PSZB-24	3/22/05	25	120
PSZB-24	3/22/05	30	120
PSZB-25	3/29/05	1	ND (<40)
PSZB-25	3/29/05	2.5	48
PSZB-25	3/29/05	5	ND (<40)
PSZB-25	3/29/05	7.5	ND (<40)
PSZB-25	3/29/05	10	ND (<40)
PSZB-25	3/29/05	15	ND (<40)
PSZB-25	3/29/05	20	ND (<40)
PSZB-25	3/29/05	25	ND (<40)
PSZB-25	3/29/05	30	ND (<40)
PSZB-25	3/30/05	1	ND (<40)
PSZB-26	3/30/05	2.5	86
PSZB-26	3/30/05	5	
PSZB-26		1	ND (<40) 50
PSZB-26	3/30/05	7.5	
	3/30/05	10	ND (<40)
PSZB-26	3/30/05	15	ND (<40)
PSZB-26	3/30/05	20	ND (<40)
PSZB-26	3/30/05	25	ND (<40)
PSZB-26	3/30/05	30	ND (<40)
PSZB-27	3/23/05	1	730
PSZB-27	3/23/05	2.5	2,300
PSZB-27	3/23/05	5	ND (<40)
PSZB-27	3/23/05	7,5	ND (<40)
PSZB-27	3/23/05	10	ND (<40)
PSZB-27	3/23/05	15	ND (<40)
PSZB-27	3/23/05	20	ND (<40)
PSZB-27A	3/24/05	25	ND (<40)
PSZB-27A	3/24/05	30	ND (<40)
PSZB-28	3/24/05	1	ND (<40)
PSZB-28	3/24/05	2.5	ND (<40)
PSZB-28	3/24/05	5	ND (<40)
PSZB-28	3/24/05	7.5	44
PSZB-28	3/24/05	10	ND (<40)



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Di . ID	S 1 D. 1	Sample Depth (feet	EPA Method 314.0 MOD
Boring ID	Sample Date	bgs)	Perchlorate
PSZB-28	3/24/05	15	ND (<40)
PSZB-28	3/24/05	20	ND (<40)
PSZB-28	3/24/05	25	ND (<40)
PSZB-28	3/24/05	30	ND (<40)
PSZB-29	3/24/05	1	ND (<40)
PSZB-29	3/24/05	2.5	86,000
PSZB-29	3/24/05	5	460
PSZB-29	3/24/05	7.5	310
PSZB-29	3/24/05	10	180
PSZB-29	3/24/05	15	57
PSZB-29	3/24/05	20	58
PSZB-29	3/24/05	25	ND (<40)
PSZB-29	3/24/05		ND (<40)
PSZB-30	3/24/05	1	ND (<40)
PSZB-30	3/24/05	2.5	ND (<40)
PSZB-30	3/24/05	5	ND (<40)
PSZB-30	3/24/05	7.5	ND (<40)
PSZB-30	3/24/05	10	ND (<40)
PSZB-30	3/24/05	15	ND (<40)
PSZB-30	3/24/05	20	ND (<40)
PSZB-30	3/24/05	25	ND (<40)
PSZB-30	3/24/05	30	78
PSZB-31	3/25/05	1	ND (<40)
PSZB-31	3/25/05	2.5	61
PSZB-31	3/25/05	5	41
PSZB-31	3/25/05	7.5	ND (<40)
PSZB-31	3/25/05	10	ND (<40)
PSZB-31	3/25/05	15	290
PSZB-31	3/25/05	20	210
PSZB-31	3/25/05	25	450
PSZB-31	3/25/05	30	470
PSZB-32	3/25/05	1	ND (<40)
PSZB-32	3/25/05	2.5	760
PSZB-32	3/25/05	5	940
PSZB-32	3/25/05	7.5	75,000
PSZB-32	3/25/05	10	17,000
PSZB-32	3/25/05	15	51
PSZB-32	3/25/05	20	130
PSZB-32	3/25/05	25	70
PSZB-32	3/25/05	30	ND (<40)
PSZB-33	3/25/05	1	ND (<40)
PSZB-33	3/25/05	2.5	ND (<40)
PSZB-33	3/25/05	5	ND (<40)
PSZB-33	3/25/05	7.5	130
PSZB-33	3/25/05	10	91
PSZB-33	3/25/05	15	53



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Boring ID	Sample Date	Sample Depth (feet	EPA Method 314.0 MOI
Boring ID		bgs)	Perchlorate
PSZB-33	3/25/05	20	92
PSZB-33	3/25/05	25	100
PSZB-33	3/25/05	30	49
PSZB-34	3/28/05	1	ND (<40)
PSZB-34	3/28/05	2.5	1,600
PSZB-34	3/28/05	5	86
PSZB-34	3/28/05	7.5	56
PSZB-34	3/28/05	10	47
PSZB-34	3/28/05	15	120
PSZB-34	3/28/05	20	64
PSZB-34	3/28/05	25	46
PSZB-34	3/28/05	30	45
PSZB-35	3/28/05	1	ND (<40)
PSZB-35	3/28/05	2.5	ND (<40)
PSZB-35	3/28/05	5	ND (<40)
PSZB-35	3/28/05	7.5	ND (<40)
PSZB-35	3/28/05	10	ND (<40)
PSZB-35	3/28/05	15	ND (<40)
PSZB-35	3/28/05	20	ND (<40)
PSZB-35	3/28/05	25	ND (<40)
PSZB-35	3/28/05	30	ND (<40)
PSZB-36	3/29/05	1	510
PSZB-36	3/29/05	1.5	38,000
PSZB-36	3/29/05	5	280
PSZB-36	3/29/05	7.5	2,100
PSZB-36	100 th # 100 th 1	10	ND (<40)
PSZB-36	3/29/05		
	3/29/05	15	ND (<40)
PSZB-36	3/29/05	20	ND (<40)
PSZB-36	3/29/05	25	ND (<40)
PSZB-36	3/29/05	30	ND (<40)
PSZB-37	3/29/05	1	ND (<40)
PSZB-37	3/29/05	2.5	170
PSZB-37	3/29/05	5	44
PSZB-37	3/29/05	7.5	ND (<40)
PSZB-37	3/29/05	10	ND (<40)
PSZB-37	3/29/05	15	48
PSZB-37	3/29/05	20	ND (<40)
PSZB-37	3/29/05	25	ND (<40)
PSZB-37	3/29/05	30	ND (<40)
PSZB-38	3/29/05	1	ND (<40)
PSZB-38	3/29/05	2.5	93
PSZB-38	3/29/05	5	ND (<40)
PSZB-38	3/29/05	7.5	ND (<40)
PSZB-38	3/29/05	10	ND (<40)
PSZB-38	3/29/05	15	ND (<40)
PSZB-38	3/29/05	20	ND (<40)



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

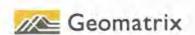
Boring ID	Sample Date	Sample Depth (feet	EPA Method 314.0 MOI
Boring ID	Sample Date	bgs)	Perchlorate
PSZB-38	3/29/05	25	ND (<40)
PSZB-38	3/29/05	30	ND (<40)
PSZB-39	3/22/05	1.5	ND (<40)
PSZB-39	3/22/05	2.5	ND (<40)
PSZB-39	3/22/05	5	ND (<40)
PSZB-39	3/22/05	7.5	ND (<40)
PSZB-39	3/22/05	10	ND (<40)
PSZB-39	3/22/05	15	ND (<40)
PSZB-39	3/22/05	20	ND (<40)
PSZB-39	3/22/05	25	ND (<40)
PSZB-39	3/22/05	30	ND (<40)
PSZB-40	3/22/05	1	ND (<40)
PSZB-40	3/22/05	2,5	ND (<40)
PSZB-40	3/22/05	5	ND (<40)
PSZB-40	3/22/05	7.5	ND (<40)
PSZB-40	3/22/05	10	ND (<40)
PSZB-40	3/22/05	15	ND (<40)
PSZB-40	3/22/05	20	ND (<40)
PSZB-40	3/22/05	25	
PSZB-40	3/22/05	30	ND (<40)
PSZB-41	4/1/05	1	ND (<40)
PSZB-41	4/1/05	2.5	ND (<40)
PSZB-41	4/1/05	5	ND (<40)
PSZB-41	4/1/05	7.5	ND (<40)
PSZB-41	4/1/05	10	ND (<40)
PSZB-41	4/1/05	15	ND (<40)
PSZB-41	4/1/05	20	ND (<40)
PSZB-41	4/1/05	25	ND (<40)
PSZB-41	4/1/05	30	ND (<40)
PSZB-42	3/30/05	1	990
PSZB-42	3/30/05	2.5	ND (<40)
PSZB-42	3/30/05	5	ND (<40)
PSZB-42	3/30/05	7.5	ND (<40)
PSZB-42	3/30/05	10	ND (<40)
PSZB-42	3/30/05	15	ND (<40)
PSZB-42 PSZB-42	3/30/05	20	ND (<40)
PSZB-42	3/30/05	25	ND (<40)
PSZB-42	3/30/05	30	ND (<40)
PSZB-43	3/30/05	1	490
PSZB-43	3/30/05	2.5	140
PSZB-43	3/30/05	5	130
PSZB-43	3/30/05	7.5	ND (<40)
PSZB-43	3/30/05	10	58
PSZB-43	3/30/05	15	ND (<40)
PSZB-43	3/30/05	20	ND (<40)
PSZB-43	3/30/05	25	41



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Boring ID	Sample Date	Sample Depth (feet	EPA Method 314.0 MOI
Doring ID		bgs)	Perchlorate
PSZB-43	3/30/05	30	40
PSZB-44	3/30/05	1	ND (<40)
PSZB-44	3/30/05	2.5	ND (<40)
PSZB-44	3/30/05	5	400
PSZB-44	3/30/05	7.5	130
PSZB-44	3/30/05	10	71
PSZB-44	3/30/05	15	52
PSZB-44	3/30/05	20	290
PSZB-44	3/30/05	25	390
PSZB-44	3/30/05	30	220
PSZB-45	2/8/06	1	ND (<40)
PSZB-45	2/8/06	2.5	ND (<40)
PSZB-45	2/8/06	6	ND (<40)
PSZB-45	2/8/06	7.5	ND (<40)
PSZB-45	2/8/06	10	ND (<40)
PSZB-45	2/8/06	15	ND (<40)
PSZB-45	2/8/06	20	ND (<40)
PSZB-45	2/8/06	25	ND (<40)
PSZB-45	2/8/06	30	ND (<40)
PSZB-45	2/8/06	35	ND (<40)
PSZB-45	2/8/06	40	ND (<40)
PSZB-46	3/30/05	1	ND (<40)
PSZB-46	3/30/05	2.5	ND (<40)
PSZB-46	3/30/05	5	730
PSZB-46	3/30/05	7.5	330
PSZB-46	3/30/05	10	470
PSZB-46	3/30/05	15	1,800
PSZB-46	3/30/05	20	3,700
PSZB-46	3/30/05	25	
	11 1000 0.00		160
PSZB-46	3/30/05	30	50
PSZB-47 PSZB-47	4/1/05	1	1,100
	4/1/05	2.5	1,800
PSZB-47	4/1/05	5	1,500
PSZB-47	4/1/05	7.5	260
PSZB-47	4/1/05	10	330
PSZB-47	4/1/05	15	180
PSZB-47	4/1/05	20	120
PSZB-47	4/1/05	25	430
PSZB-47	4/1/05	30	240
PSZB-48	3/2/06	1	ND (<40)
PSZB-48	3/2/06	2.5	ND (<40)
PSZB-48	3/2/06	5	ND (<40)
PSZB-48	3/2/06	7.5	ND (<40)
PSZB-48	3/2/06	10	ND (<40)
PSZB-48	3/2/06	15	ND (<40)
PSZB-48	3/2/06	20	ND (<40)



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Boring ID	Sample Date	Sample Depth (feet	EPA Method 314.0 MOD
		bgs)	Perchlorate
PSZB-48	3/2/06	25	93
PSZB-48	3/2/06	30	41
PSZB-48	3/2/06	35	ND (<40)
PSZB-48	3/2/06	40	ND (<40)
PSZB-49	3/30/05	1	71
PSZB-49	3/30/05	2.5	530
PSZB-49	3/30/05	5	16,000
PSZB-49	3/30/05	7.5	210
PSZB-49	3/30/05	10	110
PSZB-49	3/30/05	15	67
PSZB-49	3/30/05	20	ND (<40)
PSZB-49	3/30/05	25	ND (<40)
PSZB-49	3/30/05	30	ND (<40)
PSZB-49	3/30/05	35	NA
PSZB-49	3/30/05	40	NA
PSZB-50	2/8/2006	1	ND (<40)
PSZB-50	2/8/2006	2.5	ND (<40)
PSZB-50	2/8/2006	5	ND (<40)
PSZB-50	2/14/2006	7.5	ND (<40)
PSZB-50	2/14/2006	10	ND (<40)
PSZB-50	2/14/2006	15	ND (<40)
PSZB-50	2/14/2006	20	ND (<40)
PSZB-50	2/14/2006	25	ND (<40)
PSZB-50	2/14/2006	30	ND (<40)
PSZB-50	2/14/2006	35	ND (<40)
PSZB-50	2/14/2006	40	ND (<40)
PSZB-51	2/8/2006	1	ND (<40)
PSZB-51	2/8/2006	2.5	ND (<40)
PSZB-51	2/8/2006	5	ND (<40)
PSZB-51	2/14/2006	7.5	ND (<40)
PSZB-51	2/14/2006	10	ND (<40)
PSZB-51A	2/15/06	15	ND (<40)
PSZB-51A	2/15/06	20	ND (<40)
PSZB-51A	2/15/06	25	ND (<40)
PSZB-51A	2/15/06	30	ND (<40)
PSZB-51A	2/15/06	35	ND (<40)
PSZB-51A	2/15/06	40	ND (<40)
PSZB-52	3/2/2000	1	670
PSZB-52	3/2/2006	2.5	15,000
PSZB-52	3/2/2006	5	1,100
PSZB-52	3/2/2006	7.5	140
PSZB-52		10	130
	3/2/2006		
PSZB-52	3/2/2006	15	160
PSZB-52	3/2/2006	20	140
PSZB-52	3/2/2006	25	230
PSZB-52	3/2/2006	30	460



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Boring ID	Sample Date	Sample Depth (feet bgs)	EPA Method 314.0 MOD
Bornig ID			Perchlorate
PSZB-52	3/2/2006	35	71
PSZB-52	3/2/2006	40	120
PSZB-53	2/21/2006	1	ND (<40)
PSZB-53	2/21/2006	2	ND (<40)
PSZB-53	2/21/2006	5	ND (<40)
PSZB-53	2/21/2006	7.5	ND (<40)
PSZB-53	2/21/2006	10	ND (<40)
PSZB-53A	2/22/2006	15	ND (<40)
PSZB-53A	2/22/2006	20	ND (<40)
PSZB-53A	2/22/2006	25	ND (<40)
PSZB-53A	2/22/2006	30	ND (<40)
PSZB-53A	2/22/2006	35	ND (<40)
PSZB-53A	2/22/2006	40	ND (<40)
PSZB-54	2/21/2006	1	ND (<40)
PSZB-54	2/21/2006	2	ND (<40)
PSZB-54	2/21/2006	5	ND (<40)
PSZB-54	2/21/2006	7.5	ND (<40)
PSZB-54	2/21/2006	10	ND (<40)
PSZB-54	2/21/2006	15	ND (<40)
PSZB-54	2/21/2006	20	ND (<40)
PSZB-54	2/21/2006	25	ND (<40)
PSZB-54	2/21/2006	30	ND (<40)
PSZB-54	2/21/2006	35	ND (<40)
PSZB-54	2/21/2006	40	ND (<40)
PSZB-55	2/9/2006	1	ND (<40)
PSZB-55	2/9/2006	2.5	ND (<40)
PSZB-55	2/9/2006	5	ND (<40)
PSZB-55	2/17/2006	7.5	ND (<40)
PSZB-55	2/17/2006	10	ND (<40)
PSZB-55	2/17/2006	15	ND (<40)
PSZB-55	2/17/2006	20	ND (<40)
PSZB-55	2/17/2006	25	ND (<40)
PSZB-55	2/17/2006	30	ND (<40)
PSZB-55	2/17/2006	35	ND (<40)
PSZB-55	2/17/2006	40	ND (<40)
PSZB-56	2/14/2006	1	ND (<40)
PSZB-56	2/14/2006	2.5	ND (<40)
PSZB-56	2/14/2006	5	ND (<40)
PSZB-56	2/15/06	7.5	
	The second secon		ND (<40)
PSZB-56	2/15/06	10	ND (<40)
PSZB-56	2/15/06	15	ND (<40)
PSZB-56	2/15/06	20	ND (<40)
PSZB-56	2/15/06	25	ND (<40)
PSZB-56	2/15/06	30	ND (<40)
PSZB-56	2/15/06	35	ND (<40)
PSZB-56	2/15/06	40	ND (<40)



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

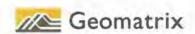
Boring ID	Sample Date	Sample Depth (feet	EPA Method 314.0 MOI
		bgs)	Perchlorate
PSZB-57	2/14/06	1	1,300
PSZB-57	2/14/06	2.5	200
PSZB-57	2/14/06	6	10,000
PSZB-57	2/14/06	7.5	1,000
PSZB-57	2/14/06	10	9,900
PSZB-57	2/14/06	15	ND (<40)
PSZB-57	2/15/06	20	ND (<40)
PSZB-57	2/15/06	25	ND (<40)
PSZB-57	2/15/06	30	ND (<40)
PSZB-57	2/15/06	35	ND (<40)
PSZB-57	2/15/06	40	ND (<40)
PSZB-58	2/9/06	1	990
PSZB-58	2/9/06	2.5	1,800
PSZB-58	2/9/06	5	940
PSZB-58	2/16/06	7.5	640
PSZB-58	2/16/06	10	150
PSZB-58	2/16/06	15	ND (<40)
PSZB-58	2/16/06	20	ND (<40)
PSZB-58	2/16/06	25	ND (<40)
PSZB-58	2/16/06	30	ND (<40)
PSZB-58	2/16/06	35	ND (<40)
PSZB-58	2/16/06	40	ND (<40)
PSZB-59	2/14/06	1	ND (<40)
PSZB-59	2/14/06	2.5	52
PSZB-59	2/14/06	5	ND (<40)
PSZB-59	2/16/06	7.5	ND (<40)
PSZB-59	2/16/06	10	ND (<40)
PSZB-59	2/16/06	15	ND (<40)
PSZB-59	2/16/06	20	ND (<40)
PSZB-59	2/16/06	25	ND (<40)
PSZB-59	2/16/06	30	ND (<40)
PSZB-59	2/16/06	35	ND (<40)
PSZB-59	2/16/06	40	ND (<40)
PSZB-60	2/7/06	1	ND (<40)
PSZB-60	2/7/06	2.5	ND (<40)
PSZB-60	2/7/06	5	ND (<40)
PSZB-60	2/8/06	10	ND (<40)
PSZB-60	2/8/06	15	
PSZB-60			ND (<40)
	2/8/06	20	ND (<40)
PSZB-60	2/8/06	25	ND (<40)
PSZB-60	2/8/06	30	ND (<40)
PSZB-60	2/8/06	35	ND (<40)
PSZB-60	2/8/06	40	ND (<40)
PSZB-61	2/9/06	1 0 0	140
PSZB-61	2/9/06	2,5	ND (<40)
PSZB-61	2/10/06	6	67



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Boring ID	Sample Date	Sample Depth (feet bgs)	EPA Method 314.0 MOI
Botting 1D			Perchlorate
PSZB-61	2/10/06	7.5	84
PSZB-61	2/10/06	10	ND (<40)
PSZB-61	2/10/06	15	ND (<40)
PSZB-61	2/10/06	20	ND (<40)
PSZB-61	2/10/06	25	ND (<40)
PSZB-61	2/10/06	30	ND (<40)
PSZB-61	2/10/06	35	ND (<40)
PSZB-61	2/10/06	40	ND (<40)
PSZB-62	2/9/06	1	1,600
PSZB-62	2/9/06	2.5	8,800
PSZB-62	2/9/06	5	350
PSZB-62	2/9/06	7.5	140
PSZB-62	2/9/06	10	ND (<40)
PSZB-62	2/9/06	15	ND (<40)
PSZB-62	2/9/06	20	ND (<40)
PSZB-62	2/9/06	25	ND (<40)
PSZB-62	2/10/06	30	ND (<40)
PSZB-62	2/10/06	35	ND (<40)
PSZB-62	2/10/06	40	ND (<40)
PSZB-63	2/9/06	1	ND (<40)
PSZB-63	2/9/06	2.5	53
PSZB-63	2/9/06	6	ND (<40)
PSZB-63	2/9/06	7.5	ND (<40)
PSZB-63	2/9/06	10	ND (<40)
PSZB-63	2/9/06	15	ND (<40)
PSZB-63	2/9/06	20	ND (<40)
PSZB-63	2/9/06	25	ND (<40)
PSZB-63	2/9/06	30	ND (<40)
PSZB-63	2/9/06	35	ND (<40)
PSZB-63	2/9/06	40	ND (<40)
PSZB-64	2/8/06		
PSZB-64	1 The Co. 1 The Co. 1	1	ND (<40)
	2/8/06	2.5	ND (<40)
PSZB-64	2/8/06	5	ND (<40)
PSZB-64	2/9/06	7.5	ND (<40)
PSZB-64	2/9/06	10	ND (<40)
PSZB-64	2/9/06	15	ND (<40)
PSZB-64	2/9/06	20	ND (<40)
PSZB-64	2/9/06	25	ND (<40)
PSZB-64	2/9/06	30	ND (<40)
PSZB-64	2/9/06	35	ND (<40)
PSZB-64	2/9/06	40	ND (<40)
PSZB-65	2/14/06	1	ND (<40)
PSZB-65	2/14/06	2.5	ND (<40)
PSZB-65	2/14/06	5	ND (<40)
PSZB-65	2/17/06	7.5	ND (<40)
PSZB-65	2/17/06	10	ND (<40)



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Boring ID	Sample Date	Sample Depth (feet	EPA Method 314.0 MOI
boring iD		bgs)	Perchlorate
PSZB-65	2/17/06	15	ND (<40)
PSZB-65	2/17/06	20	ND (<40)
PSZB-65	2/17/06	25	ND (<40)
PSZB-65	2/17/06	30	ND (<40)
PSZB-65	2/17/06	35	ND (<40)
PSZB-65	2/17/06	40	ND (<40)
PSZB-66	2/8/06	1	ND (<40)
PSZB-66	2/8/06	2.5	ND (<40)
PSZB-66	2/13/06	6	ND (<40)
PSZB-66	2/13/06	7.5	ND (<40)
PSZB-66	2/13/06	10	ND (<40)
PSZB-66	2/13/06	15	ND (<40)
PSZB-66	2/13/06	20	ND (<40)
PSZB-66	2/13/06	25	ND (<40)
PSZB-66	2/13/06	30	ND (<40)
PSZB-66	2/13/06	35	ND (<40)
PSZB-66	2/13/06	40	ND (<40)
PSZB-67	2/8/06	1	ND (<40)
PSZB-67	2/8/06	2.5	ND (<40)
PSZB-67	2/8/06	5.5	ND (<40)
PSZB-67	2/13/06	7.5	ND (<40)
PSZB-67	2/13/06	10	ND (<40)
PSZB-67	2/13/06	15	ND (<40)
PSZB-67	2/13/06	20	ND (<40)
PSZB-67	2/13/06	25	ND (<40)
PSZB-67	2/13/06	30	ND (<40)
PSZB-67	2/13/06	35	ND (<40)
PSZB-67	2/13/06	40	ND (<40)
PSZB-68	2/22/06		ND (<40)
PSZB-68	2/22/06	2.5	ND (<40)
PSZB-68	2/22/06	5	ND (<40)
PSZB-68	3/6/06	7.5	ND (<40)
PSZB-68	3/6/06	10	ND (<40)
PSZB-68	3/6/06	15	ND (<40)
PSZB-68	3/6/06	20	ND (<40)
PSZB-68	3/6/06	25	ND (<40)
PSZB-68	3/6/06	30	ND (<40)
PSZB-68	3/6/06	35	ND (<40)
PSZB-68	3/6/06	40	ND (<40)
PSZB-69	2/22/06	1	ND (<200)
PSZB-69	2/22/06	2,5	ND (<40)
PSZB-69	2/22/06	5	ND (<40)
PSZB-69			
	3/6/06	7.5	ND (<40)
PSZB-69	3/6/06	10	ND (<40)
PSZB-69	3/6/06	15	ND (<40)
PSZB-69	3/6/06	20	ND (<40)



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SUMMARY OF ANALYTICAL RESULTS FOR PERCHLORATE IN SOIL SAMPLES

Results reported in micrograms per kilogram (µg/kg)

Boring ID	Sample Date	Sample Depth (feet bgs)	EPA Method 314.0 MOL
			Perchlorate
PSZB-69	3/6/06	25	ND (<40)
PSZB-69	3/6/06	30	ND (<40)
PSZB-69	3/6/06	35	ND (<40)
PSZB-69	3/6/06	40	ND (<40)
PSZB-70	3/3/06	1	ND (<40)
PSZB-70	3/3/06	2.5	ND (<40)
PSZB-70	3/3/06	5	ND (<40)
PSZB-70	3/3/06	7.5	ND (<40)
PSZB-70	3/3/06	10	ND (<40)
PSZB-70	3/3/06	15	ND (<40)
PSZB-70	3/3/06	20	ND (<40)
PSZB-70	3/3/06	25	ND (<40)
PSZB-70	3/3/06	30	ND (<40)
PSZB-70	3/3/06	35	ND (<40)
PSZB-70	3/3/06	40	ND (<40)
PSZB-71	3/6/06	1	ND (<40)
PSZB-71	3/6/06	2.5	ND (<40)
PSZB-71	3/6/06	5	ND (<40)
PSZB-72	3/6/06	I.	44
PSZB-72	3/6/06	2.5	43
PSZB-72	3/6/06	5	ND (<40)
PSZB-72	3/7/06	7.5	ND (<40)
PSZB-72	3/7/06	10	ND (<40)
PSZB-72	3/7/06	15	ND (<40)
PSZB-72	3/7/06	20	ND (<40)
PSZB-72	3/7/06	25	ND (<40)
PSZB-72	3/7/06	30	ND (<40)
PSZB-72	3/7/06	35	ND (<40)
PSZB-72	3/7/06	40	ND (<40)
PSZB-73	3/6/06	1	100
PSZB-73	3/6/06	2.5	110
PSZB-73	3/6/06	5	42

Notes:

^{1.} Sample locations and results from previous work by Harding ESE (2001) shown in italics.

ND (<40) = Not detected above laboratory reporting limit indicated in brackets.

 ^{-- =} No sample collected due to poor recovery.

NA = Sample collected but not analyzed.



SUMMARY OF ANALYTICAL RESULTS FOR QA/QC SAMPLES

AZUSA / IRWINDALE STUDY AREA

Azusa and Irwindale, California

Results reported in micrograms per liter (µg/l)

Sample ID	Sample Date	QA/QC Sample Type	EPA Method 314.0
			Perchlorate
032105EB	3/21/05	Equipment Rinse Blank - Drill Casing	ND (<3)
032505EB	3/25/05	Equipment Rinse Blank - Drill Casing	ND (<3)
20060207EQB	2/7/06	Equipment Rinse Blank - Drill Casing	ND (<3)

¹ ND (<3) = Not detected above laboratory reporting limit indicated in brackets.



Table 6-1 Summary of Vadose Zone Soil Physical Parameters

Azusa/Irwindale Study Area Azusa and Irwindale, California

D	Depth		Moisture Content (% by wt.) ²	Mass of Water	Mass of Solids	Dry Bulk Density (g/cm³)³	Total Sample Volume (cm³)	Volume Water (cm³)	Volume Pores (cm³)	Total Porosity	Volumetric Water Content	1		_
Boring	(feet bgs)	Lithology	(70 Dy WL.)	(grams)	(grams)	(g/cm)	(cm)	(cm)	(cm)	(%)	(unitless)	(percent)	(mg/kg)⁴	(unitless)
PDZB-01	8	Medium Sand	1.1	1.1	98 9	2.12	46.65	1.10	8.02	17.2	0.0236	2 36	1300	0.0013
PDZB-01	28	Coarse Sand	1.8	18	98.2	2 06	47.67	1.80	9.68	20 3	0 0378	3.78	1050	0.00105
PDZB-01	48	Medium Sand	1.2	1.2	98 8	2.08	47 50	1.20	11 78	24.8	0.0253	2.53	1150	0 00115
PDZB-01	68	Gravel	09	0.9	99.1	1 97	50.30	0 90	13 93	27 7	0 0179	1.79	1150	0.00115
PDZB-01	88	Medium Sand	6.3	63	93.7	1.89	49 58	6.31	13.63	27.5	0 1273	12 73	810	0 00081
PDZB-01	98	Medium Sand	2.7	2.7	97.3	2.03	47.93	271	11 89	24.8	0.0564	5 64	1250	0.00125
PDZB-15	8	Medium Sand	23	2.3	97.7	2 12	46.08	2.30	8.85	19 2	0.0500	5.00	1150	0.00115
PDZB-15	28	Coarse Sand	1	1	99	2.07	47.83	1.00	10 62	22.2	0.0209	2.09	1150	0.00115
PDZB-15	48	Coarse Sand	1.8	18	98.2	2 16	45.46	1.80	8 27	18 2	0 0397	3 97	1200	0 0012
PDZB-15	68	Coarse Sand	36	3.6	96.4	2.12	45 47	3 61	8.87	19.5	0.0793	7.93	1450	0.00145
PDZB-15	98	Coarse Sand	27	2.7	97.3	1.94	50.15	2 71	13.19	26.3	0 0539	5 39	1150	0.00115
	Mean					2.05				22.52		4.84		0.0012

Notes

- 1 feet bgs = feet below ground surface.
- 2 % by wt = percent by weight
- 3 g/cm3 = grams per cubic centimeter
- 4 mg/kg = milligrams per kilogram



TABLE 6-2 VS2DT INPUT PARAMETERS

Azusa/Irwindale Study Area Azusa and Irwindale, California

Base Case Input Parameter	Value				
Horizontal Saturated Hydraulic Conductivity	350 feet per day (ft/day)				
Hydraulic Conductivity Vertical Anisotropy	10:1				
Initial Moisture Content	5%				
Vadose Zone Porosity	23%				
Effective Saturated Zone Porosity	10%				
Ambient Infiltration from Precipitation	3 inches per year (in/year)				
Van Genuchten Parameters					
Alpha	2,59				
Beta	1.35				
Residual Moisture Content	3%				
Longitudinal Dispersivity	20 feet				
Ratio of Longitudinal:Transverse Dispersivity	10				



TABLE 6-3 VS2DT SENSITIVITY SIMULATIONS

Azusa/Irwindale Study Area Azusa and Irwindale, California

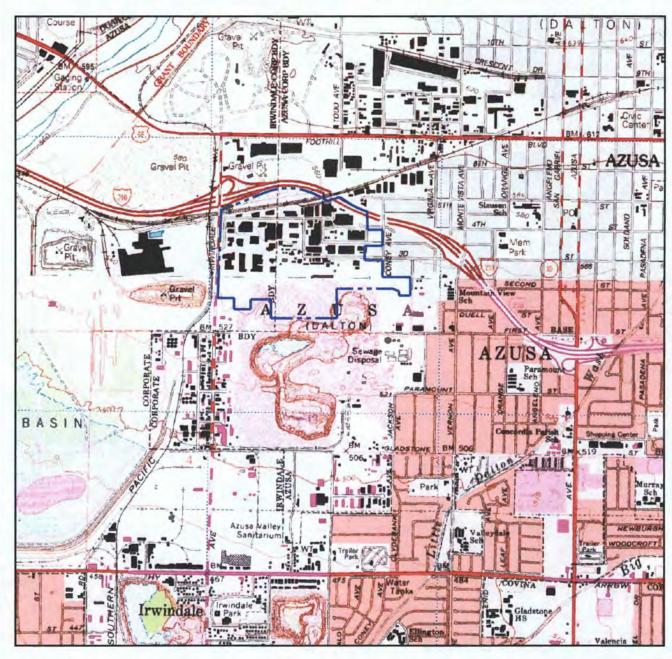
		Peak Soil Concentration (mg/kg)	Percent Change	Time of Peak Concentration	Percent Change
_		based on Groundwater Concentration			
Input Parameter	Value	of 6 μ g/l ² at Site Boundary	(%)	at Site Boundary (years)	(%)
Saturated Hydraulic Conductivity					
Ksat ³ - Increase	450 ft/day	1641	26.04%	79	-2 47%
Ksat - Base Case	350 ft/day	1302	0 00%	81	0 00%
Ksat - Decrease	275 ft/day	1044	-19.86%	83	2.50%
Residual Moisture Content					
RMC ⁴ - Increase	4%	1364	4 78%	87	6.90%
RMC - Base Case	3%	1302	0.00%	81	0.00%
RMC - Decrease	1%	1170	-10 18%	70	-13.37%
Initial Moisture Content					
Initial Vw - Increase	10%	1372	5 33%	74	-8.44%
Initial Vw - Base Case	5%	1302	0.00%	81	0 00%
Initial Vw - Decrease	4%	1240	-4 79%	83	2 57%
Vadose Zone Porosity					
Porosity - Increase	28%	1482	13.77%	97	19.91%
Porosity - Base Case	23%	1302	0.00%	81	0.00%
Porosity - Decrease	17%	1061	-18.52%	62	-23.67%
Ambient Infiltration from Precipitation					
Infiltration Rate - Increase	4 in/year	1000	-23.19%	63	-22.77%
Infiltration Rate - Base Case	3 in/year	1302	0.00%	81	0.00%
Infiltration Rate - Decrease	2 in/year	1892	45.32%	117	44 22%
Longitudinal Dispersivity					
αL ⁵ - Increase	30 feet	1343	3.17%	73	-9 94%
αL - Base Case	20 feet	1302	0.00%	81	0.00%
αL - Decrease	10 feet	1093	-16 04%	91	11.94%
Ratio of Longitudinal:Transverse Dispersivity					
αL/αT ⁶ - Increase	20	1302	-0 03%	81	0.07%
αL/αT - Base Case	10	1302	0 00%	81	0.07%
αL/αT - Decrease	5	1303	0 04%	81	-0.02%
	-				

Notes:

- 1 mg/kg = milligrams per kilogram.
- 2. /2g/1 = micrograms per liter
- 3. Ksat = saturated hydraulic conductivity.
- 4 RMC = residual moisture content
- 5 aL =longitudinal dispersivity.
- 6 αT = transverse dispersivity



FIGURES



EXPLANATION

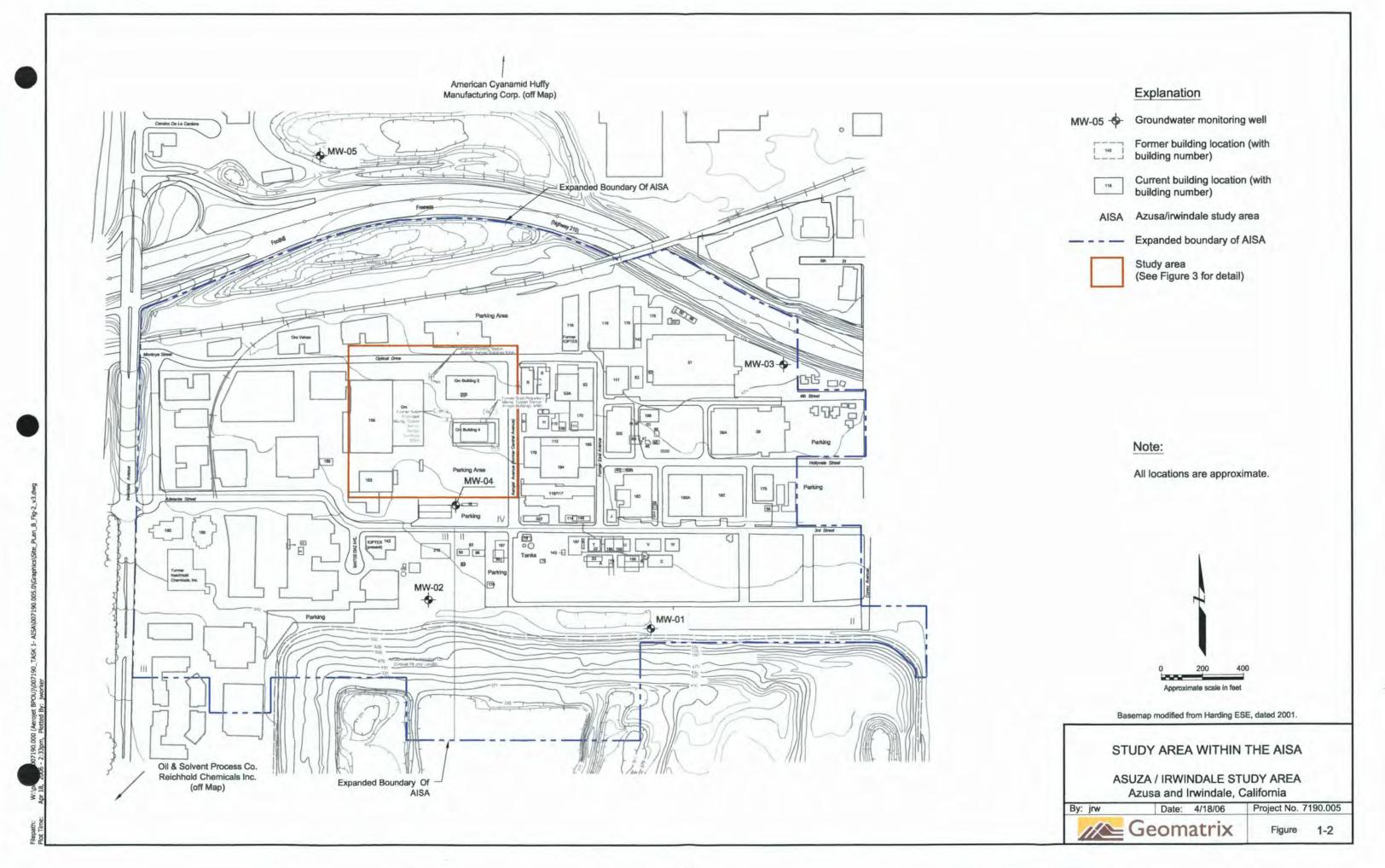
EXPANDED BOUNDARY OF AZUSA/IRWINDALE STUDY AREA (AISA)

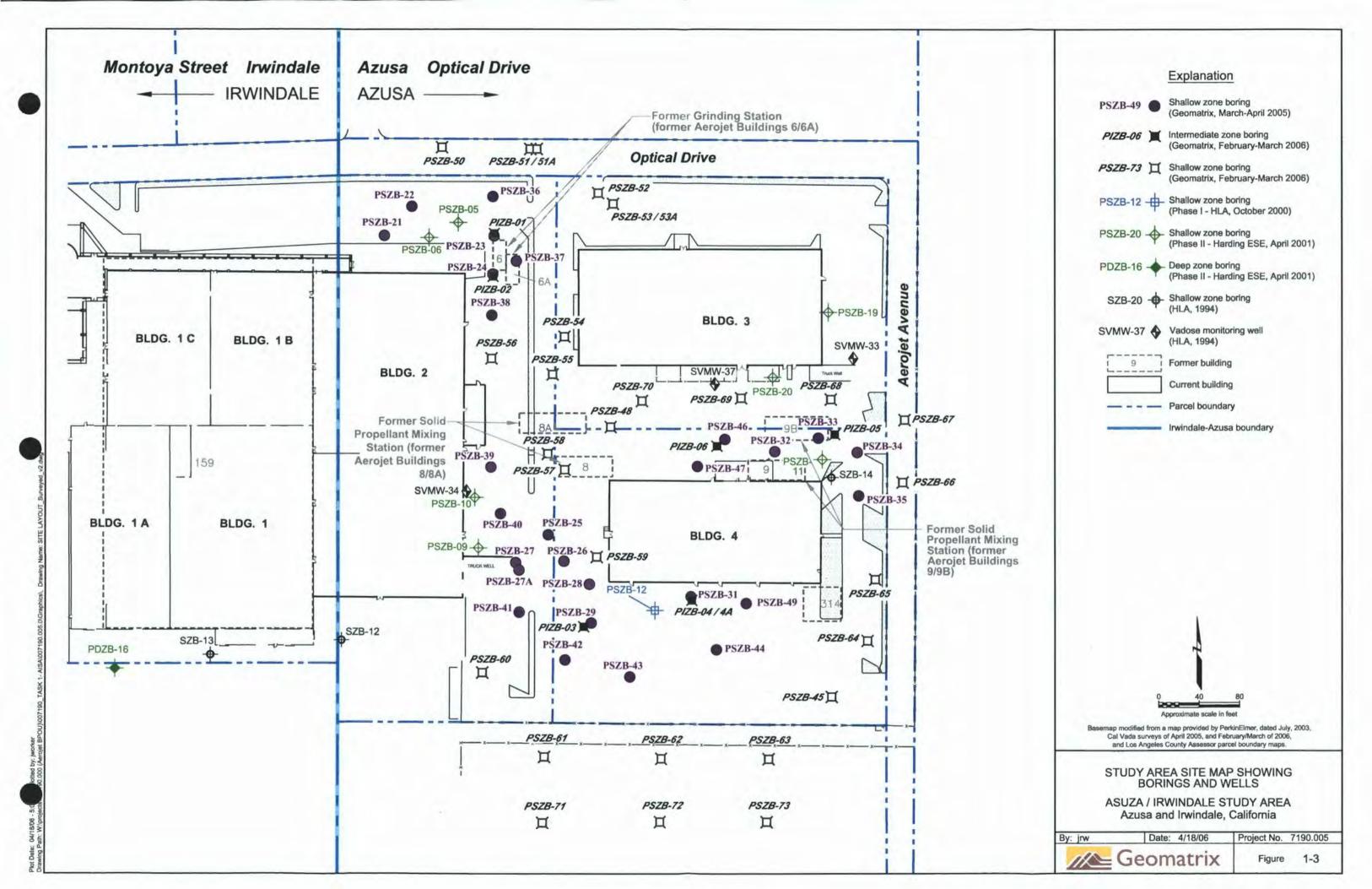


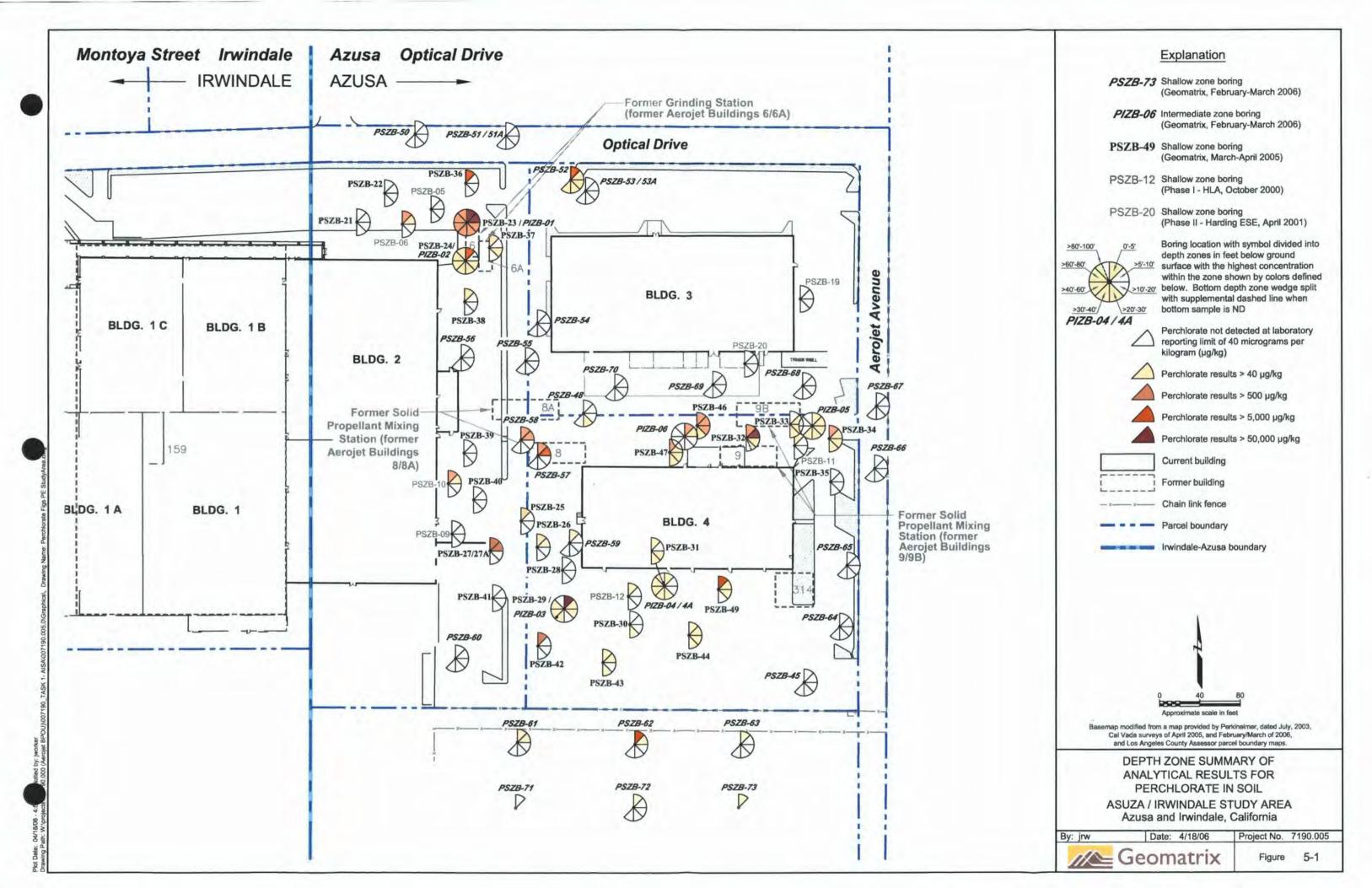
Base map modified from U.S.G.S. 7.5 minute quadrangle maps AZUSA, California 1995, and BALDWIN PARK, California 1966; Photo Revised 1981.

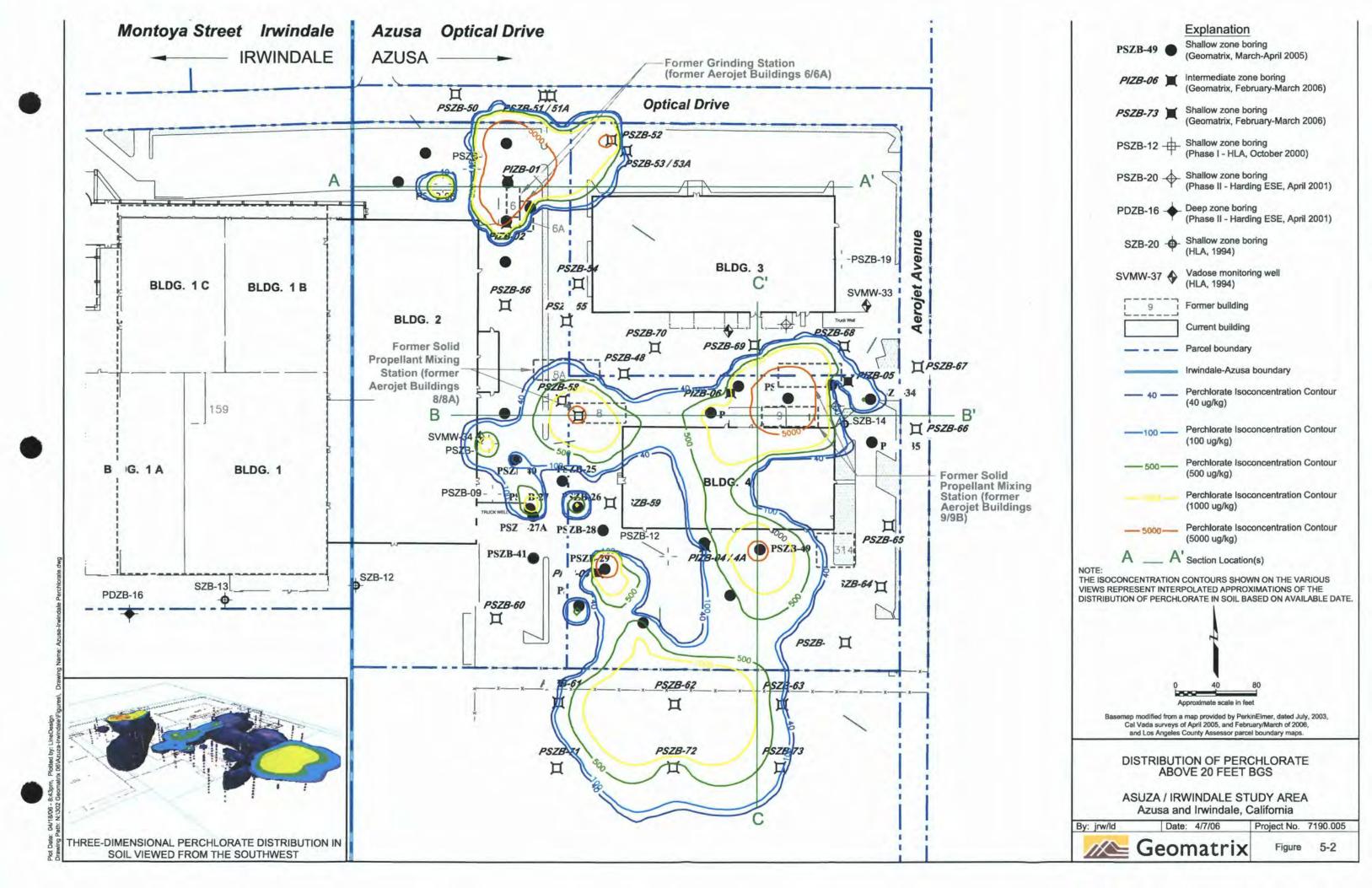
SITE LOCATION MAP ASUZA / IRWINDALE STUDY AREA Azusa and Irwindale, California

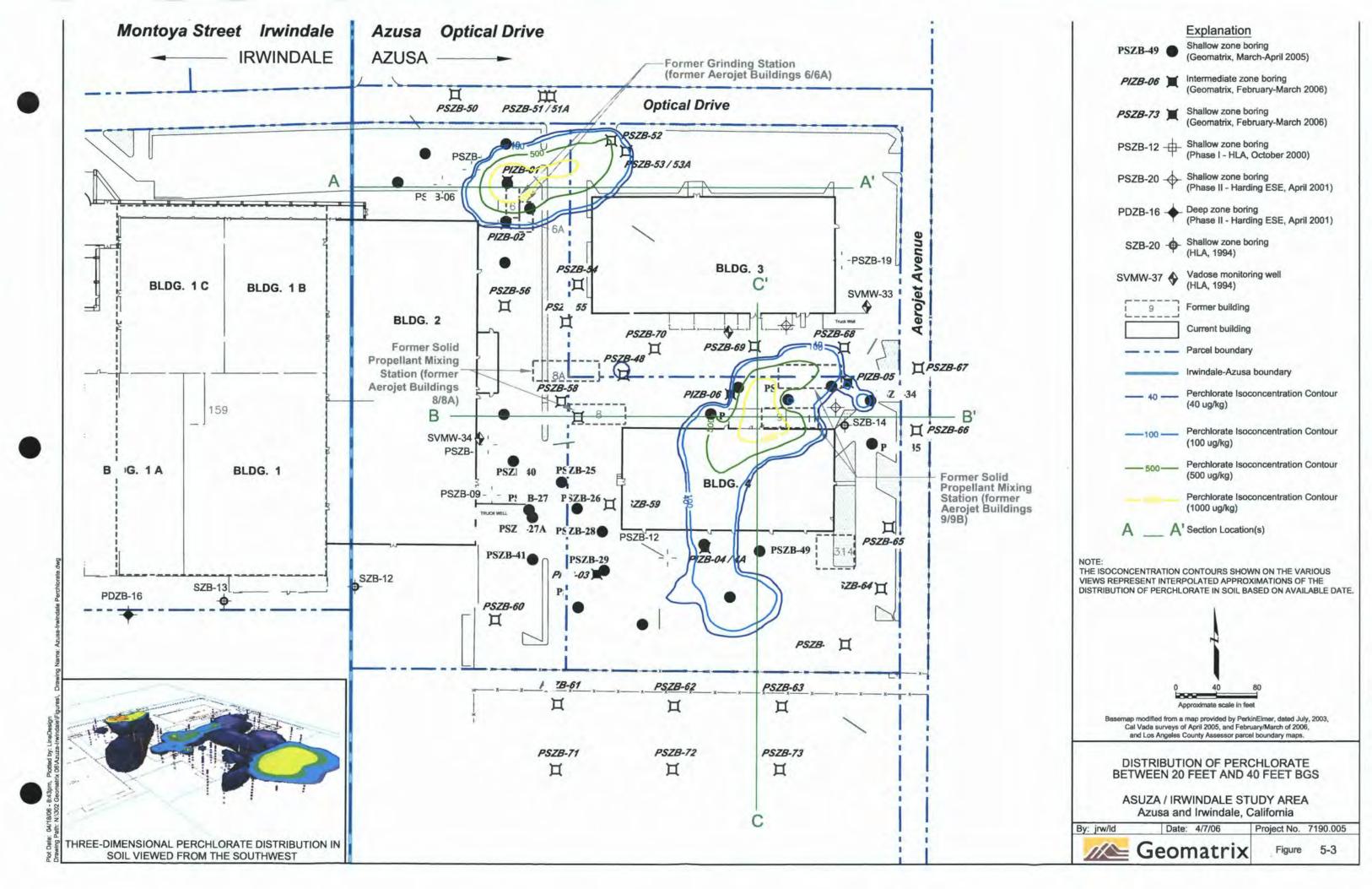
By: jrw	Date: 3/29/06	Project No. 7	190.005
MA-G	eomatrix	Figure	1_1

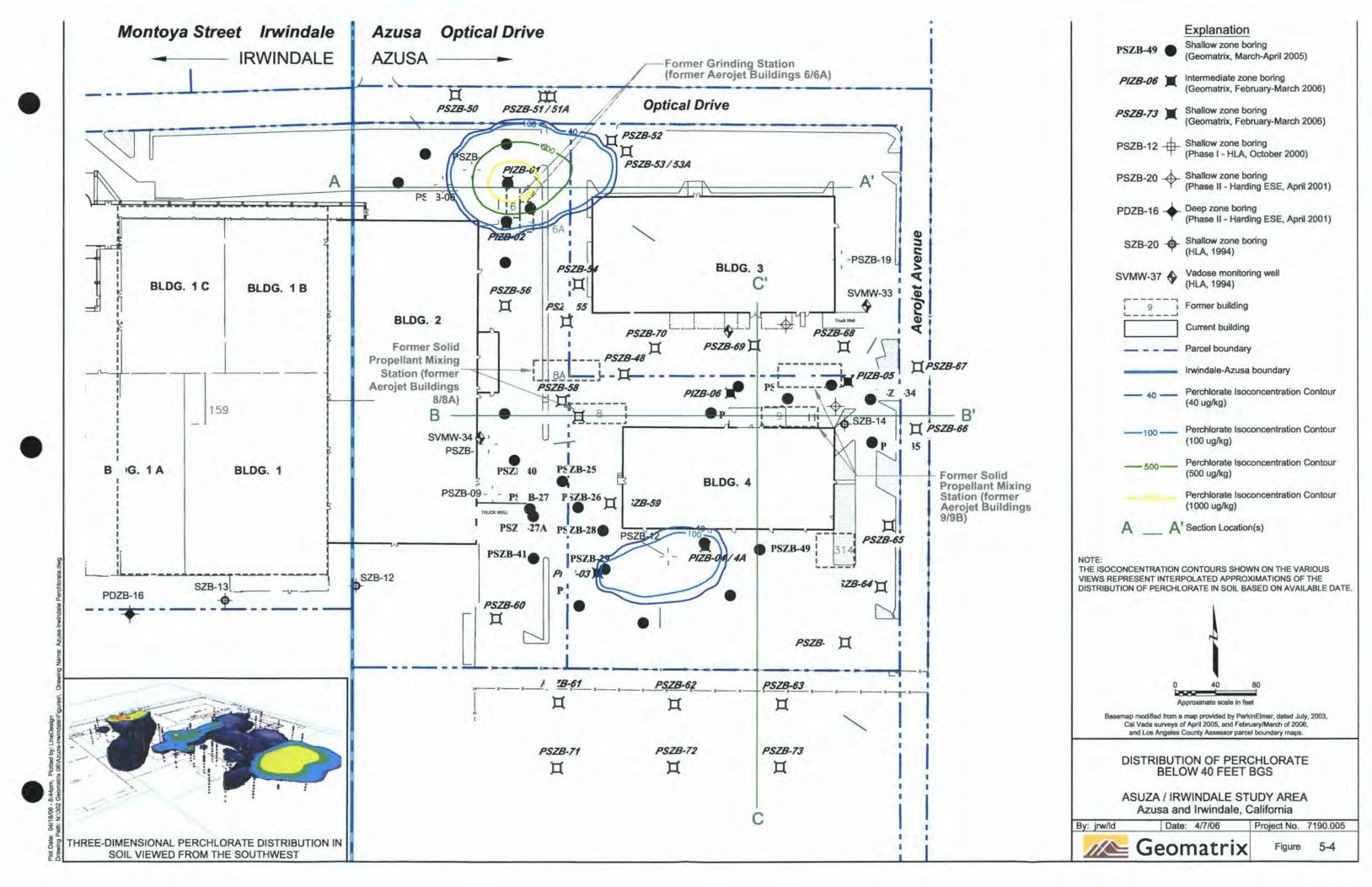


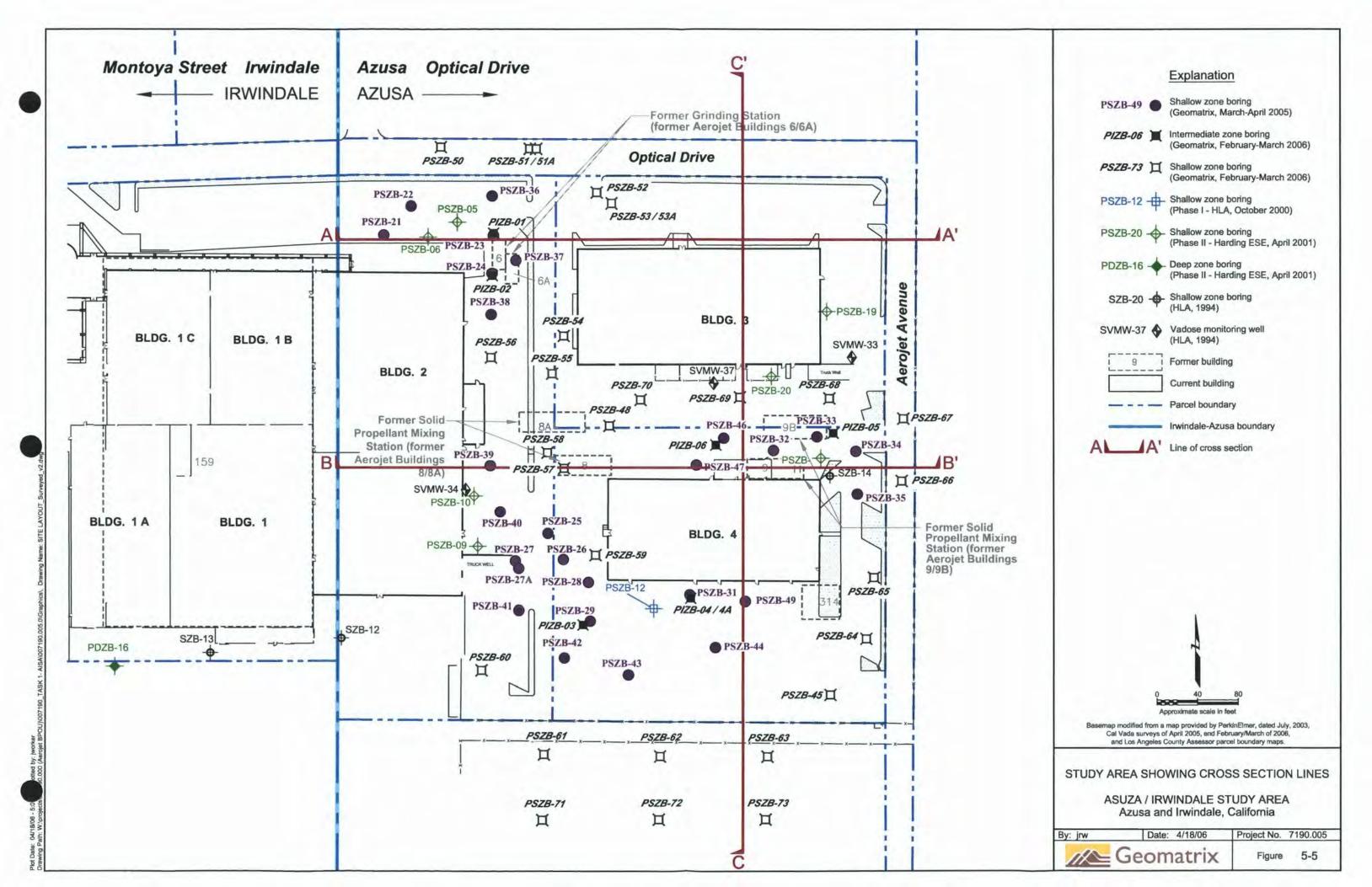


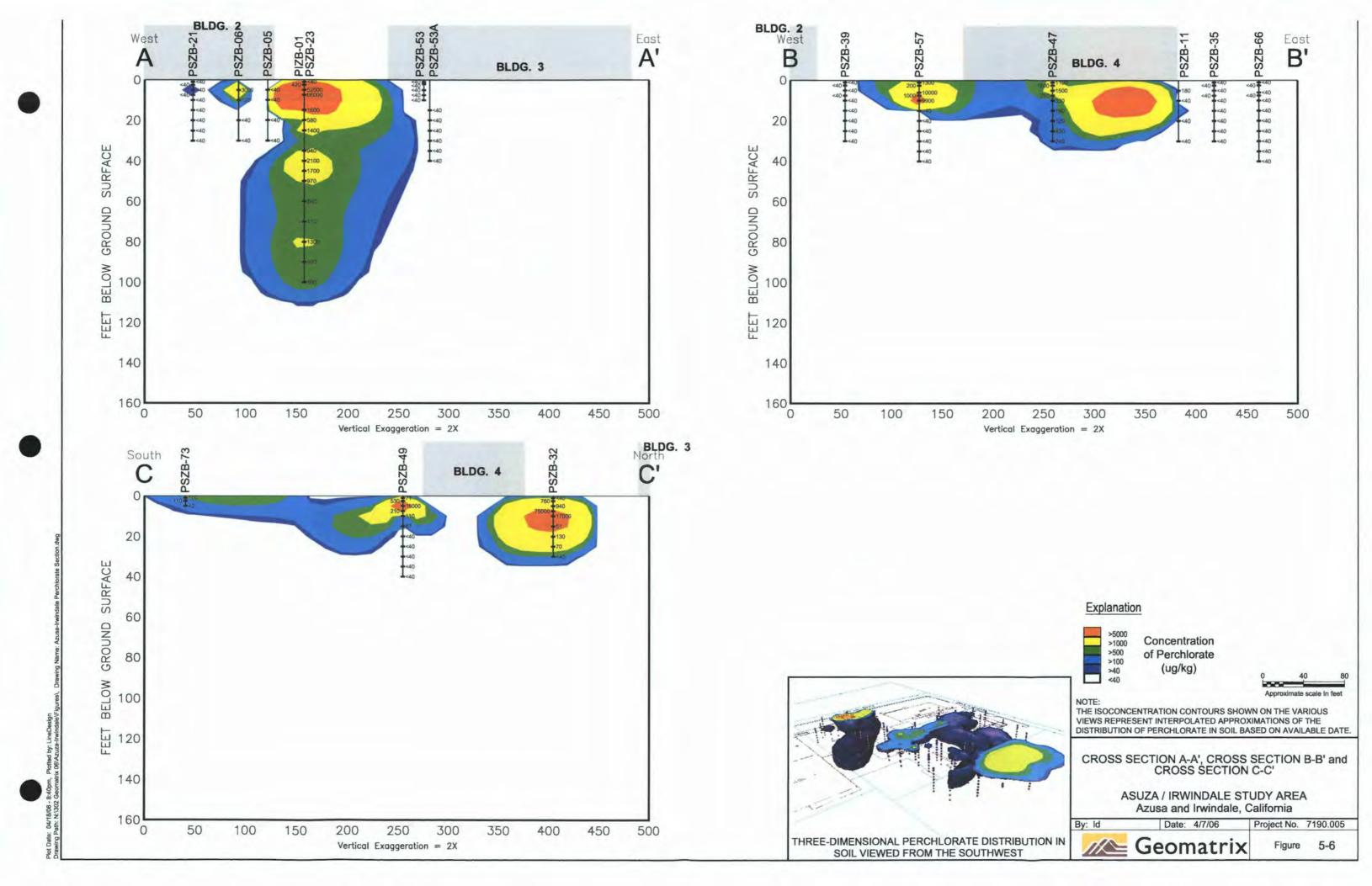


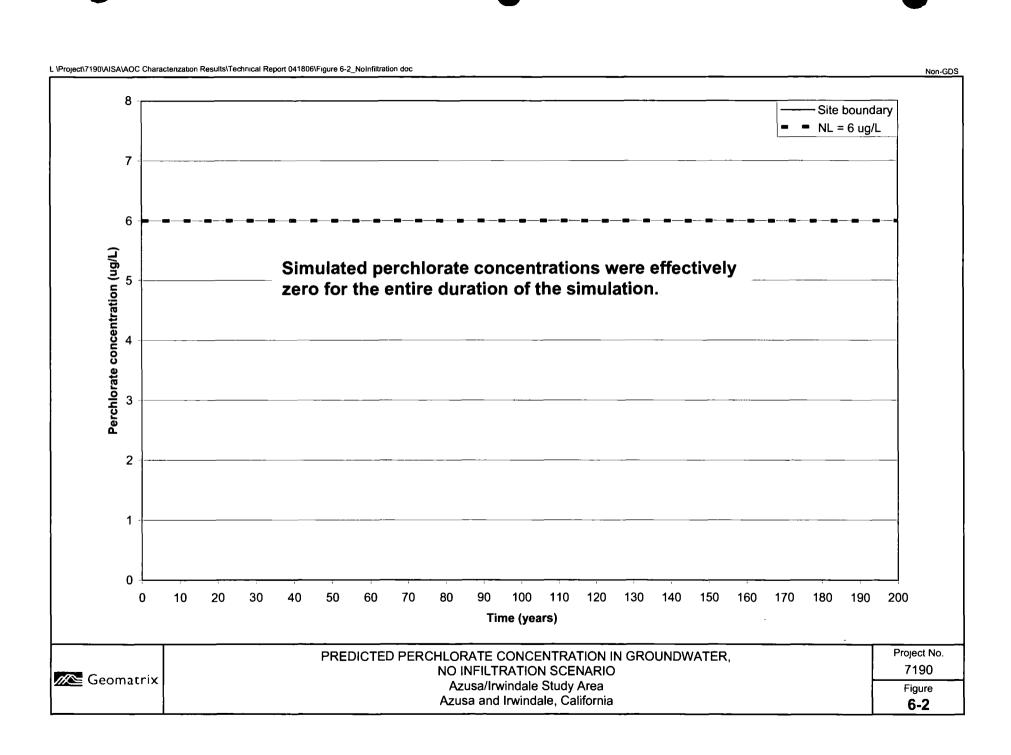


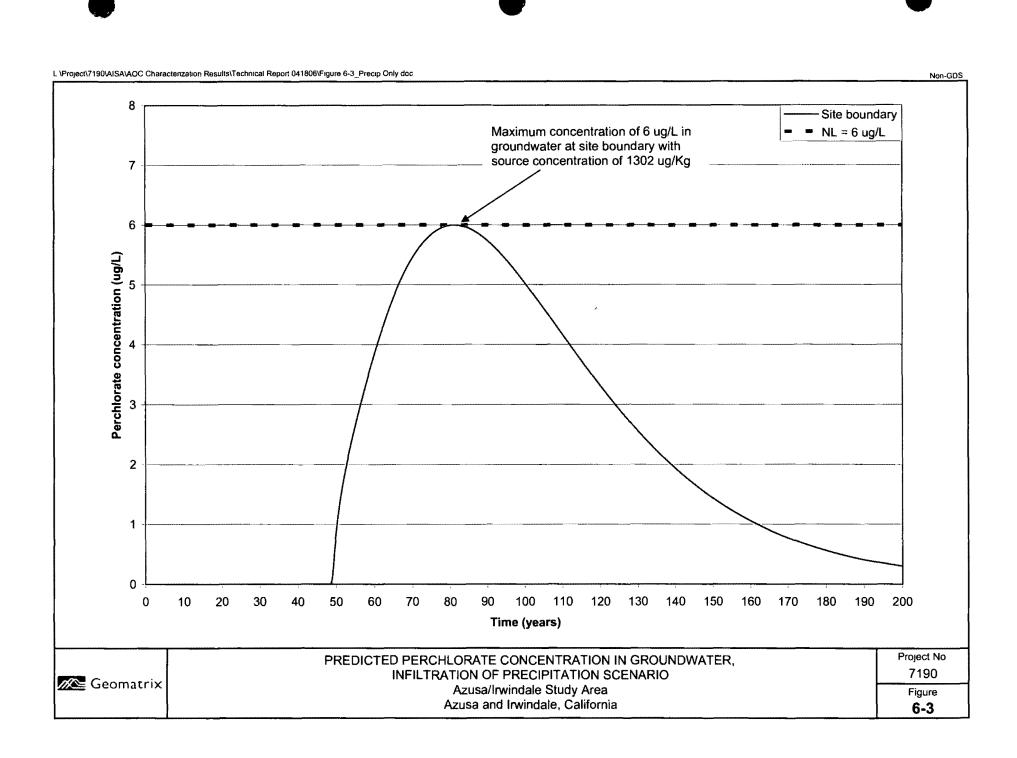












PARTIALLY SCANNED OVERSIZE ITEM(S)

See document # 2279345 for partially scanned image(s).

PLATE 1

For complete hardcopy version of the oversize document contact the Region IX Superfund Records Center



APPENDIX A

BORING LOGS

	VIRWINDALE STUDY AREA and Irwindale, California	Log	of Boring	g No. Pl	ZB-01	
BORING LÓCATION:	PerkinElmer	ELEVATION AI 568.47 ft ms		3)		
DRILLING CONTRAC	CTOR: Layne Christenson, Co.	DATE STARTE 2/27/06	D:	DATE FINISI 2/27/06		
DRILLING METHOD:	Dual Wall Air Percussion	TOTAL DEPTH 100.5		MEASURING Ground su	ırface	
DRILLING EQUIPME	NT: Foremost Drills AP-1000	DEPTH TO WATER	FIRST NA	COMPL.	24 HRS. NA	
SAMPLING METHOD	Cuttings from cyclone	LOGGED BY: P. Jeffers				
HAMMER WEIGHT:	NA DROP: NA	RESPONSIBLE G. Rees		ONAL:	REG. NO. 6612	
DEPTH (feet) Sample No. Sample Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. de cementation, react. w/HCl, geo. int	ensity, structure, er.	PID READING (ppm)	REM	MARKS	
S S B			8		-	
4	~3" asphalt SEE BORING LOG FOR PSZB-23 (located	approximately 2	-		ed to 2.5 feet d surface (bgs	
1-	feet south) FOR LITHOLOGY TO 30' bgs		-		0.5' bgs with 9	
2-				casing and I		
_			-	bgs, begin o		
3-			-	samples at		
4-				cuttings coll	sessed from ected through	
				the cyclone		
5-			-			
			_			
6-			1			
7-						
-						
8-						
9-						
-			-			
10-						
11-						
12-						
13-						
			-			
14-1-1	Geomatrix Consultants			005.0	RMRK	
	Geomatrix Consultants	Pro	ject No. 7190.	005.0	Page 1 of 7	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California

Log of Boring No. PIZB-01 (cont'd)

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SAMPLES		T	o l	
Sample No. Sample Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.		PID READING (ppm)	REMARKS
	SEE BORING LOG FOR PSZB-23 (located approximately 2 feet south) FOR LITHOLOGY TO 30' bgs			
<u> </u>	reet south) FOR LITHOLOGY TO 30' bgs			
']		[7		
5-				
7-				
4	•	11		
3-				
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9-		-		
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3-		14		
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0-		[]		
1		1 +		

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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-01 (cont'd) SAMPLES PID READING Blows/ 6 inches DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. 32 33 34 35-PIZB POORLY GRADED GRAVEL with SAND (GP): grayish brown 01-(10YR 5/2), moist, ~85% gravel, ~15% fine to coarse sand 35 36 37 ~70% gravel, ~30% fine to coarse sand, trace fines 38 39 40-01-40 41 42-~85% gravel, ~15% fine to coarse sand 43 45 01-46 47

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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-01 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION

NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. REMARKS POORLY GRADED GRAVEL with SAND (GP): continued 49 50-01-51 52 53-54 55 ~80% gravel, ~20% fine to coarse sand 56-57 58 59 60-PIZB 01-60 61 62-

63

64

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PROJE	ECT:	AZ Az	USA usa a	/IRWINDALE STUDY AREA and Irwindale, California	Log of Bor	ing l	No. Pl	ZB-01	(cont'd)
DEPTH (feet)	Sample S No.	Sample M	Blows/ m 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. of cementation, react. w/HCl, geo. is	lensity, structure,		PID READING (ppm)	F	REMARKS
	SS	S	6 B	~85% gravel, ~15% fine to coarse sand		-	RE		
	}			To high graver, 13 % line to coarse sailu					
66-	1								
-	}					14			
67-									
_	-					14			
68-	{					-			
-									
69-						-			
_				,		-			
70-	PIZB-								
	70					1-			
71-						[]			
70									
72-									
73-									
13-								Difficult d	Irilling 73' - 78' b
74-									
'-									
75-									
				To N graver, 25 % line to coarse sailu					
76-	1								
_									
77-									
_	-			•					
78-									
_				•					
79-									
_									
80-									
_	01- 80								
81-									
-									
82-	<u>L.</u> _	<u>i</u>						<u> </u>	Page -
				Geomatrix Consultants		Project	 No. 7190.0	005.0	Page 5 of 7
									I age J UI /

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-01 (cont'd) SAMPLES PID READING (PPM) DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 83 84 85 ~85% gravel, ~15% fine to coarse sand 86 87 88 89 PIZB 90 01-91 92 93 94 95 POORLY GRADED SAND with GRAVEL (SP): dark brown (7.5YR 3/4), moist, ~70% fine to coarse sand, ~30% gravel, trace fines 96 97 98

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	PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-01 (cont'd)						
(feet)	Sample Sample Blows/	DESCRIPTION NAME (USCS): color, moist, % by wt., pla cementation, react. w/HCl, g	ast. density, structure, eo. inter.		PID READING (ppm)	REMARKS	
		POORLY GRADED SAND with GRAV	EL (SP): continued				
100 - PIZE 01- 100	-					Boring backfilled with bentonite chips and	
101-		Bottom of boring at 100.5 ft bgs				continuously hydrated Surface patched with asphalt	
102-						aopriait	
103-							
104-							
105-							
_							
106-							
107							
108							
109-							
110-							
111-							
112-							
113-							
114-							
115							
116	<u> </u>		· 			RMRK3	
		Geomatrix Consultants		Project	No. 7190.	005.0 Page 7 of 7	

PROJECT			IRWINDALE STU			Log	of Borin	g No. P	IZB-02	
BORING L	LOCA	TION:	PerkinElmer .			ELEVATION A		8)		
DRILLING	CON	ITRACT	OR: Layne Chris	tenson, Co.		DATE STARTED: DATE FINISHED:				
			<u></u>			2/28/06 TOTAL DEPT	H (ft.):	2/28/06 MEASURIN	NG POINT:	
			Dual Wall Air Pe			100.5 DEPTH TO	FIRST	Ground s	surface 24 HRS.	
DRILLING	EQU	IPMEN	T: Foremost Drill	s AP-1000	· · · · · · · · · · · · · · · · · · ·	WATER	NA	NA.	NA NA	
SAMPLIN	G ME	THOD:	Cuttings from cy	clone		LOGGED BY: P. Jeffers				
HAMMER	WEI	GHT:	NA	DROP: NA			LE PROFESSI	ONAL:	REG. NO. 6612	
	SAMP		1	DESCRIPTION		•	၂ ပ			
DEPTH (feet) Sample	No. Sample	Blows/ 6 inches	NAME (USCS	color, moist, % by wt., plasternentation, react. w/HCl, get	st. density, structu o. inter.	ire,	PID READING (ppm)	RI	EMARKS	
Sar	Sar	B E	Surface Elevation:	567.08 ft msl (NAVD 88)						
		} }	~3" asphalt	LOG FOR PSZB-24 (loca	ated approximat	alv 2	-		ered to 2.5 feet and surface (bgs)	
1-				R LITHOLOGY TO 30' bg		, <u>2</u>				
. '_									00.5' bgs with 9" I hammer bit	
2-										
	}							Drilled cor	tinuously to 35' collecting	
3-								samples a		
								 Lithology a	assessed from	
4-								cuttings co	ollected through	
	ĺ							the cyclon	е	
5-										
				•						
6-										
7-										
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8-										
9-										
10-										
11-										
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'4]										
12										
13-										
	_									
14-1-			//S Geom	atrily Canadidants		l _p	piont No. 7400	005.0	RMRK3	
			Geom	atrix Consultants		Pr	oject No. 7190	0.005.0	Page 1 of 7	

Log of Boring No. PIZB-02 (cont'd)

Project No. 7190:005.0

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See BORNIC LOG FOR PSZB-24 (located approximately 2 feet north) FOR LITHOLOGY TO 30' bgs See See See See See See See See See S		SAMP	IFS I		· · ·			
SEE BORING LOG FOR PSZB-24 (located approximately 2 feet north) FOR LITHOLOGY TO 30' bgs 16- 17- 18- 19- 20- 21- 22- 23- 24 25- 26 27 28- 29- 30- 31-			Blows/ 6	DESCRIPTION NAME (USCS): color, moist, % by wt , plast. density, structure, cementation, react. w/HCl, geo. inter.		PID READING (PPm)	REMARKS	
16- 16- 17- 18- 19- 20- 21- 22- 23- 23- 24- 25- 25- 26- 27- 28- 28- 29- 30-		\top		SEE BORING LOG FOR PSZB-24 (located approximately 2	-			
16- 17- 18- 19- 20- 21- 22- 23- 23- 24- 25- 26- 27- 28- 29- 30- 31-	15			feet north) FOR LITHOLOGY TO 30' bgs				
17- 18- 19- 20- 21- 22- 23- 24- 24- 25- 26- 27- 28- 30- 31-						ļ		
17- 18- 19- 20- 21- 22- 23- 24- 24- 25- 26- 27- 28- 30- 31-	16-							
18- 19- 20- 21- 22- 23- 24- 25- 26- 27- 28- 30- 31-								
18- 19- 20- 21- 22- 23- 24- 25- 26- 27- 28- 30- 31-	17-							
19- 20- 21- 21- 23- 24- 25- 26- 27- 28- 29- 30-								
19- 20- 21- 21- 23- 24- 25- 26- 27- 28- 29- 30-	18-			•				
20- 21- 22- 23- 24- 25- 26- 27- 28- 29- 30-	4							
21- 22- - 23- - 24- 25- 26- - 27- - 28- 30- 31	19-							
21- 22- - 23- - 24- 25- 26- - 27- - 28- 30- 31	4							
22- 23- 24- 25- 26- 27- 28- 29- 30-	20-		.					
22- 23- 24- 25- 26- 27- 28- 29- 30-	4							
23- 24- 25- 26- 27- 28- 29- 30-	21-							
23- 24- 25- 26- 27- 28- 29- 30-	4 -	1.						
24- 25- 26- 27- 28- 29- 30-	22							4
24- 25- 26- 27- 28- 29- 30-	4							
25- 26- 27- 28- 29- 30- 31	23-							
25- 26- 27- 28- 29- 30- 31	4				-			
26- 27- 28- 29- 30- 31	24-							
26- 27- 28- 29- 30- 31	\exists				-			
27- 28- 29- 30- 31-	25-			<u>.</u>	-			
27- 28- 29- 30- 31-	+				-			
28- 29- 30- 31-	26-				-14			
28- 29- 30- 31-	-				-			
29-	27-							
29-	1				-			
30-	28-				14			
30-	_							
31	29-							
31	T							
	30-							
	74							
	J7		·1			<u></u>	RI	MRK3

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-02 (cont'd) SAMPLES PID READING (PPm) DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. 32 33 34 PIZB 35 POORLY GRADED GRAVEL with SAND (GP): brown 02-(7.5YR 5/3), moist, ~80% gravel, ~20% fine to coarse sand 35 36 37 ~75% gravel, ~25% fine to coarse sand 38 39 40 02-40 41 42 ~85% gravel, ~15% fine to coarse sand 43 44 45 02-45 46

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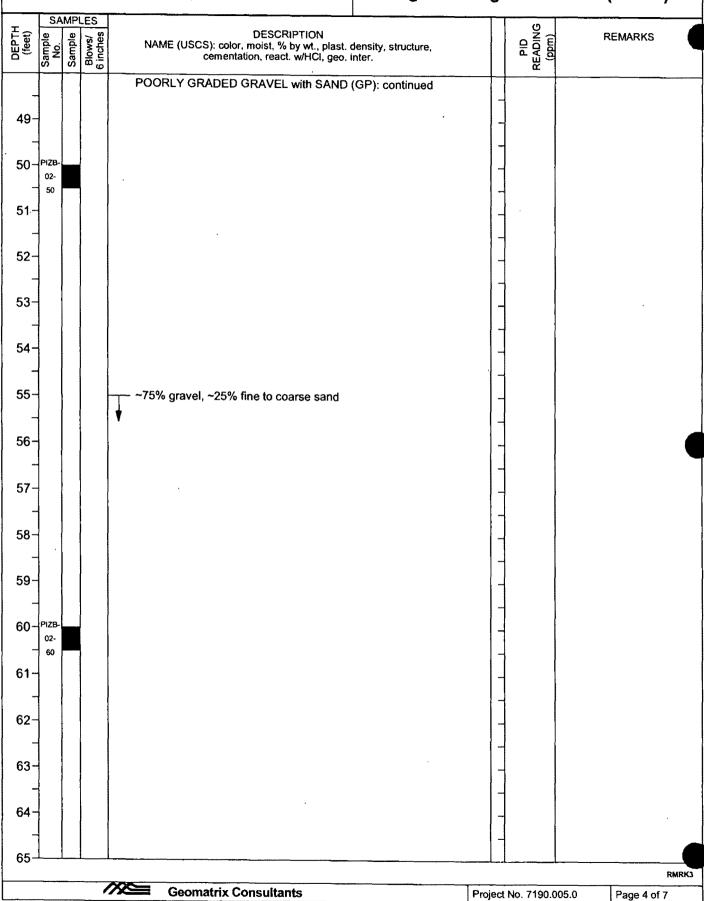
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Log of Boring No. PIZB-02 (cont'd)



Azusa	VIRWINDALE STUDY AREA and Irwindale, California	Log of Boring No. PIZB-02 (cont'd)			
DEPTH (feet) Sample No. Sample Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. c cementation, react. w/HCl, geo. ii	density, structure, nter.	PID READING (ppm)		
66- 66- 67- 68- 69- 70- 71- 72- 73- 74- 75- 76- 77-	~85% gravel, ~15% fine to coarse sand, tr		READ (ppr		
79-		-			
80 - PIZB- 02- 80 81 -		-			
	Geomatrix Consultants	Project	No. 7190.005.0 Page 5 of 7	RMRK	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-02 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION
NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo, inter. REMARKS POORLY GRADED GRAVEL with SAND (GP): continued 83 84 85-~85% gravel, ~15% fine to coarse sand 86 87 88 89 PIZB-90-02-91 92-93-94 95 ~80% gravel, ~20% fine to coarse sand 96-

97

98

99

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PROJI		Az	usa an	RWINDALE STUDY AREA nd Irwindale, California	Log of Bo	ring l	No. Pl	ZB-02 (cont'd)
DEPTH (feet)	Sample Sample No.	Sample 3	Blows/ m 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. c cementation, react. w/HCl, geo. ii	lensity, structure,		PID READING (ppm)	REMARKS
••-	0)	0)	9	POORLY GRADED GRAVEL with SAND (-	т.	
-	1			or with the state of the state	or p. continued	14		
100-	PIZB- 02-							Boring backfilled with
-	100		 	Bottom of boring at 100.5 ft bgs				bentonite chips and
101-	1			at recion by		-		continuously hydrated Surface patched with
-	1					14		asphalt
102-						-		
-	1					14		
103-						[-		
-						-		
104-						-		
•••	1							
105-						-		
-						-		
106-	1.					-		
-	1					-		
107-						-		
-						-		
108-								
-	-					-		
109-						-		
-	-							
110-	1							
-						-		
111-	1							
-	1							
112-								
-	-							
113-	-							
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114-	-							
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116-	<u> </u>							
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				Geomatrix Consultants		Project	No. 7190.0	005.0 Page 7 of 7

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PROJE				IRWINDALE STI nd Irwindale, Ca						g No. P	IZB-03	
BORIN	IG LO	CAT	ION:	PerkinElmer			ELEVATION A			8)		
DRILLI	ING C	ONT	RACT	OR: Layne Chris	tenson, Co.	-	DATE START 3/1/06	ΓED:		3/1/06		
DRILLI	ING M	IETH	IOD:	Dual Wall Air Pe	rcussion	·	TOTAL DEPT 100.5			Ground s	RING POINT: d surface	
DRILLI	ING E	QUII	PMEN	T: Foremost Drill	s AP-1000		DEPTH TO WATER		IRST NA	COMPL.	24 HRS. NA	
SAMP	LING	MEŤ	HOD:	Cuttings from c	yclone		LOGGED BY P. Jeffers					
HAMM	IER W	/EIG	HT:	NA	DROP: NA		RESPONSIB G. Rees	LE.P	ROFESSI	ONAL:	REG. NO. 6612	
DEPTH (feet)	Sample No.	Sample M	Blows/ TI 6 inches	NAME (USCS	DESCRIPTION): color, moist, % by wt., plast. d ementation, react. w/HCl, geo. ir	lensity, structu nter.	re,		PID READING (ppm)	RE	MARKS	
Δ -	Sa	Sa	9 i	Surface Elevation:	564.35 ft msl (NAVD 88)]_	RE (red to 2.5 feet	
1- 2- 3- 4- 5- 6- 7- 8-) FOR LITHOLOGY TO 30' b					casing and Drilled con bgs, begin samples at	35' bgs ssessed from llected through	
11	-											
12	-											
13	-							-				
14	Д		<u> </u>	L					<u> </u>	1	RMRH	
				Geom	atrix Consultants		Pr	oject	No. 7190	.005.0	Page 1 of 7	

Log of Boring No. PIZB-03 (cont'd)

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		o. 2011.19 1.011 1.22 00 (0011.4)
SAMPL		9 5544849
Sample No.	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure cementation, react. w/HCl, geo. inter.	e, BID REMARKS (Bpm.)
- 0, 0,	Ψ	alu R
	SEE BORING LOG FOR PSZB-29 (located approximate feet northeast) FOR LITHOLOGY TO 30' bgs	-
5-		
-		
6-		
4		
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4		
8-		
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19-		
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4		. -
30-		-
31		

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-03 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION **REMARKS** NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. 32 33 34 35 POORLY GRADED SAND with GRAVEL (SP): brown (7.5YR 5/4), moist, ~85% fine to coarse sand, ~15% gravel 36 37 POORLY GRADED GRAVEL with SAND (GP): light bluish 38gray (GLEY 7/1), moist, ~85% gravel, ~15% fine to coarse sand, trace fines 39 PIZB 03-41 42-POORLY GRADED SAND with GRAVEL (SP): brown 43 (7.5YR 5/4), moist, ~75% fine to coarse sand, ~25% gravel, trace fines 44 45 PIZB 03-46

~70% fine to coarse sand, ~30% gravel RMRK3 **Geomatrix Consultants** Project No. 7190.005.0 Page 3 of 7

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48

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-03 (cont'd) SAMPLES PID READING (PPM) Blows/ 6 inches **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued 49 50 PIZB 03-50 51 52-53 54 55 ~80% fine to coarse sand, ~20% gravel, trace fines 56 57 58 59 PIZB 03-61 62-

RMRK3 **Geomatrix Consultants** Project No. 7190.005.0 Page 4 of 7

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		Az	usa ar	RWINDALE STUDY AREA nd Irwindale, California	Log of Bor	ZB-03 (cont'd)	
DEPTH (feet)	Sample S No.	Sample N	Blows/ m 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. cementation, react. w/HCl, geo.	density, structure, inter.	PID READING (ppm)	REMARKS
66-				POORLY GRADED GRAVEL with SAND (5YR 7/1), moist, ~85% gravel, ~15% fine fines	(GP): light gray to coarse sand, trace		Gravel/sand contact at 6 bgs
-				·			
67 – –							
68-							
69-							
70-	PIZB- 03-						
- - 71	70						
- 72-							
- 73-							
_							
74- -		j					
75- -				~75% gravel, ~25% fine to coarse sand		_	
76- -							,
77 – –			!				
78-							
- -79							
- -08							
- - 81	03- 80						
_							
82-				Geomatrix Consultants		 	RMI

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-03 (cont'd) SAMPLES PID READING (ppm) **DESCRIPTION REMARKS** NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 83 84 85 ~85% gravel, ~15% fine to coarse sand 86-87 88 89 PIZB-90 03-91 92-93 94 95 ~75% gravel, ~25% fine to coarse sand 96 97 98 RMRK3 **Geomatrix Consultants**

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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-03 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION **REMARKS** NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued PIZB-100-Boring backfilled with 100 bentonite chips and Bottom of bonng at 100.5 ft bgs continuously hydrated 101 Surface patched with asphalt 102 103-104 105 106-107 108-109 110 111 112-113-114-115 116

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RMRK3

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Project No. 7190.005.0

ORING LOCATION: PerkinElmer RILLING CONTRACTOR: Layne Christenson, Co.	ELEVATION A	ND DATUM:		
	こうかい ドノ サーハ		n\	
RILLING CONTRACTOR: Layne Christenson, Co.	DATE START	sl (NAVD 88 ED:	DATE FINIS	SHED:
	2/7/06		2/7/06	
RILLING METHOD: Dual Wall Air Percussion	TOTAL DEPT	H (ft.):	MEASURIN Ground s	
	DEPTH TO	FIRST	COMPL.	24 HRS.
RILLING EQUIPMENT: Foremost Drills AP-1000	WATER	NA	NA	NA
AMPLING METHOD: Cuttings from cyclone	LOGGED BY: P. Jeffers			
ANNUED MEIOUT, ANA	RESPONSIBL	E PROFESSIO	ONAL:	REG. NO.
IAMMER WEIGHT: NA DROP: NA	G. Rees			6612
SAMPLES SAMPLES DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structur cementation, react. w/HCi, geo. inter. Surface Elevation: 566.62 ft msl (NAVD 88)	re,	PID READING (ppm)	RE	MARKS
Surface Elevation: 566.62 ft msl (NAVD 88)		RE (
~4" asphalt POORLY GRADED GRAVEL with SAND (GP): dark bro				red to 2.5 feet nd surface (bgs)
1 PIZB-04-1 2-PIZB-04-3-25 PIZB-04-5-5 PIZB-04-10	rayish 0% rayish		Drilled to 5 casing and	om sidewalls of 0.5' bgs with 9" hammer bit essessed from ellected through
13 - ~75% gravel, ~25% fine to coarse sand, trace fines		-		
14		<u> </u>	<u></u>	RMRK
Geomatrix Consultants	D	oject No. 7190	005.0	Page 1 of 4

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-04 (cont'd) SAMPLES PID READING (PPm) DESCRIPTION
NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. REMARKS POORLY GRADED GRAVEL with SAND (GP): continued 15-PIZB 16 17-~65% gravel, ~35% fine to coarse sand, trace fines 18-19 PIZB 04-20 21 22 23 24 25-PIZB 04-25 26 27 28 29-

RMRK3

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04-30 PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-04 (cont'd) SAMPLES DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 32 POORLY GRADED SAND with GRAVEL (SP): grayish brown 33 (2.5Y 5/2), moist, ~60% fine to coarse sand, ~40% gravel, trace 34 35-04-35 36 37 ~55% fine to coarse sand, ~45% gravel, trace fines 38 39 40 41 42-43 44 45-PIZB 04-46 47 POORLY GRADED GRAVEL with SAND (GP): see next page 48

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RMRK3

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Log of Boring No. PIZB-04 (cont'd)

		Log o	Log of Boring No. PIZB-04 (contra)		
SAMF		DESCRIPTION		g Z (REMARKS
Sample Sample Sample Sample	Blows/ 6 inches	NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, react, w/HCl, geo, inter.		PID READING (ppm)	REWARKS
		POORLY GRADED GRAVEL with SAND (GP): grayish b	rown		
19-		(2.5Y 5/2), moist, ~70% gravel, ~30% fine to coarse sand, fines	trace		
9]					
O-PIZB-					
04-					
1- "		Bottom of boring at 50.5 ft bgs			Boring backfilled with bentonite chips and
					continuously hydrated
2-			`]		Surface patched with asphalt
4					
3-					
+] _		
4-		•	1-1		
1			1-1		
5					
1			[-]		
6-			1-1		
_			1-1		
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9-			11		
"]					
o-					
1-					
4			11		
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3-			-		
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4-					
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5-1	<u> </u>				RMF

		/IRWINDALE STU			Log	of Boring	g No. P	IZB-04A
BORING LOCAT					ELEVATION A			
DOTAING LOOK				'	566.71 ft m	sl (NAVD 8	B)	NED
-		ron: Layne Chris			DATE START 2/28/06		DATE FINIS 3/1/06 MEASURIN	-
DRILLING MET	HOD	Dual Wall Air Pe	rcussion		TOTAL DEPT 50.5		Ground s	urface
DRILLING EQU	IPMEN	T: Foremost Drill	s AP-1000		DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA
SAMPLING ME	THOD	Cuttings from cy	/clone		LOGGED BY. P. Jeffers			
HAMMER WEIG	SHT:	NA	DROP. NA	· · · ·		E PROFESSI	ONAL.	REG NO. 6612
SAMPI			DESCRIPTION			U		
Cfeet) Sample No.	Blows/ 6 inches	NAME (USCS). color, moist, % by wt., plast ementation, react. w/HCl, geo.	density, structui inter.	re,	PID READING (ppm)	RE	MARKS
Sar	₩ ë	Surface Elevation:	566 71 ft msl (NAVD 88)	7		RE		
	<u> </u>	~3" asphalt	LOG FOR PIZB-04 (locate	d approximatel	ly 5 foot	<u> </u>		red to 2.5 feet nd surface (bgs)
			THOLOGY TO 50.5' bgs	и арргохіпіаце:	ly 5 leet		below grou	ilu suriace (bgs)
1-						[]		00.5' bgs with 9" hammer bit
2-							casing and	nammer bit
].	Drilled con bgs, begin	tinuously to 60'
3-							samples at	
3]							Lithology a	ssessed from
4-							cuttings co	llected through
"]							the cyclone	•
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ן רטי								
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12-				•				
13-								
14		1						RMRK3
		Geom	atrix Consultants		Pro	oject No 7190.	.005 0	Page 1 of 7

PROJECT. AZUSA/IRWINDALE STUDY AREA Log of Boring No. PIZB-04A (cont'd) Azusa and Irwindale, California SAMPLES PID READING (ppm) DEPTH (feet) Sample Blows/ 6 inches DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter SEE BORING LOG FOR PIZB-04 (located approximately 5 feet north) FOR LITHOLOGY TO 50.5' bgs 15 16 17 18 19 20-21 22 23 24 25 26 27 28 29 30 RMRK3 178 **Geomatrix Consultants**

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Log of Boring No. PIZB-04A (cont'd)

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₽	SAMPLES			DESCRIPTION	{ }	9 ၂	REMARKS
DEPTH (feet)	Sample No.	Sample	Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, react, w/HCl, geo, inter.	,	PID READING (ppm)	KEWAKKS
		1		SEE BORING LOG FOR PIZB-04 (located approximately north) FOR LITHOLOGY TO 50.5' bgs	5 feet		
32-				notal) FOR EITHOLOGY TO 50.5 bgs	1		
,, <u>,</u>					17		
33~							
~							
34~							
35-							
36~				·	1-		
37-					14		
-					14		
38-		Ì			-		
-					14		
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					14		
41-					14		
~_					1-1		
42-					1-1		
					1-1		
43-					11		
-					1-1		
44-					11		
45					-		
45~					11		
46				·	11		
46-							
47-					17		
41-							
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Log of Boring No. PIZB-04A (cont'd)

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DEPTH (feet)	aple of	MPI Ped L	Blows/ m 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.		PID	ADING pm)	REMARKS	
۵	Sar	Sar	9 e	SEE BORING LOG FOR PIZB-04 (located approximately 5 feet		ļ.	RE/		
-				north) FOR LITHOLOGY TO 50.5' bgs		-			
49- -				·					
50-									
-]	$\frac{1}{2}$			ŀ
51 - -						1			
52-]			
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55- -						1			
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58-]			
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59- -					-				
60-	PIZB-			POORLY GRADED GRAVEL with CAND (CD). Balance to]			
-	04A- 60			POORLY GRADED GRAVEL with SAND (GP): light yellowish brown (2.5Y 6/3), moist, ~85% gravel, ~15% fine to coarse sand		-			İ
61-					.	1			
62-				·					
-						-			
63-									
64-									
_						+			
65-	.L	L	Ll			1		RMRK3	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-04A (cont'd) SAMPLES PID READING (ppm) DESCRIPTION
NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. REMARKS POORLY GRADED GRAVEL with SAND (GP): continued 66 POORLY GRADED SAND with GRAVEL (SP): light yellowish brown (2.5Y 6/3), moist, ~85% fine to coarse sand, ~15% gravel, trace fines 67 68-69-PIZB-04A-71 72-73-74 75-POORLY GRADED GRAVEL with SAND (GP): light yellowish brown (2.5Y 6/3), moist, ~80% gravel, ~20% fine to coarse sand, trace fines 76-77 78-79-80-

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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-04A (cont'd) SAMPLES PID READING (ppm) Sample DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 83 84 85 ~85% gravel, ~15% fine to coarse sand 86 87 88 89 PIZB 90 04A-91 92 93 94 95 ~75% gravel, ~25% fine to coarse sand 96 97 98 99 RMRK3

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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-04A (cont'd) SAMPLES PID READING (ppm) DESCRIPTION
NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. **REMARKS** POORLY GRADED GRAVEL with SAND (GP): continued 100-Boring backfilled with 100 bentonite chips and Bottom of boring at 100.5 ft bgs continuously hydrated 101 Surface patched with asphalt 102 103-104 105 106 107-108-109-110-111-112-113-114 115-116

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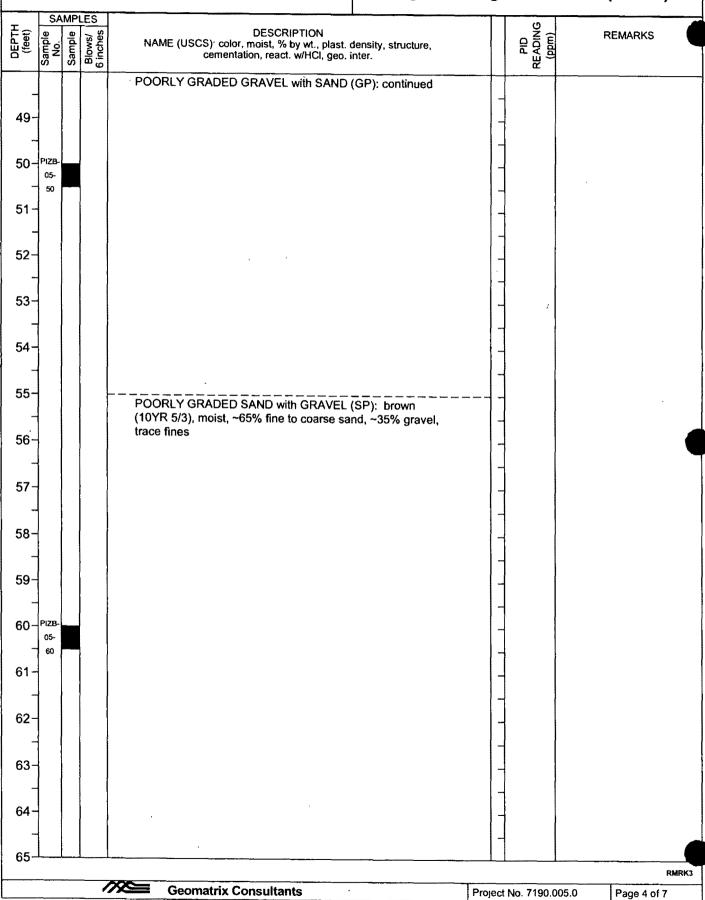
Project No. 7190.005.0

	PROJECT: AZUSA/ Azusa a	IRWINDALE S and Irwindale, C						g No. P	IZB-05	
PRILLING CONTRACTOR: Layne Christenson, Co. DATE FINISHED: 224/06 PRILLING METHOD: Dual Wall Air Percussion DEPTH TO LINE COUNTRACTOR: Layne Christenson, Co. PRILLING EQUIPMENT: Foremost Drills AP-1000 DEPTH TO LINE FINISHED: 224/06 PRILLING EQUIPMENT: Foremost Drills AP-1000 DEPTH TO LINE FINISH COUNTS SAMPLES C	30RING LOCATION:	PerkinElmer A	DC							
SAMPLING EURIPHOLO Cuttings from cyclone or as noted in remarks SAMPLING METHOD. Cuttings from cyclone or as noted in remarks SAMPLING EQUIPMENT: Foremost Drills AP-1000 SAMPLING ECUIPMENT: Foremost Drills AP-1000 SAMPLING ECUIPMENT: Foremost Drills AP-1000 SAMPLING ECUIPMENT: Foremost Drills AP-1000 SAMPLING METHOD. Cuttings from cyclone or as noted in remarks ANA SAMPLING METHOD. Cuttings from cyclone or as noted in remarks SAMPLING METHOD. Cuttings from cyclone or as noted in remarks ANA SAMPLING METHOD. Cuttings from cyclone or as noted in remarks SAMPLING METHOD. Cuttings from cyclone or as noted in remarks SAMPLING METHOD. Cuttings from cyclone or as noted in remarks SAMPLING METHOD. Cuttings from cyclone or as noted in remarks SAMPLING METHOD. Cuttings from cyclone or as noted in remarks SAMPLING METHOD. Cuttings from cyclone or as noted in remarks SAMPLING METHOD. Cuttings from cyclone or as noted in remarks SAMPLING METHOD. Cuttings from cyclone or as noted in remarks NA NA RESPONSIBLE PROFESSIONAL: REG. NO. 6612 REMARKS REMARKS REMARKS SCHEMON SAMPLING NO. 6612 REMARKS SCHEMON SAMPLING NO. 6612 REMARKS SCHEMON SAMPLING NO. 6612 REMARKS REMARKS PODRLY GRADED GRAVEL with SAND (GP): grayish brown (tilty as noted as sample with a name augus or 222/06 1 and 2.5' samples collected from sidewalls toning, and 5' samples with a name augus or 222/06 1 and 2.5' samples collected from sidewalls toning, and 5' samples with a name augus or 222/06 1 and 2.5' samples collected from sidewalls toning, and 5' samples with a name augus or 222/06 1 and 2.5' samples collected from sidewalls toning, and 5' samples with a name augus or 222/06 1 and 2.5' samples collected from sidewalls toning, and 5' samples with a name augus or 222/06 1 and 2.5' samples collected from sidewalls toning, and 5' samples with a name augus or 222/06 1 and 2.5' samples collected from sidewalls toning, and 5' samples collected from sidewalls toning, and 5' samples collected from sidewalls toning, and 5' samp	<u></u>						IAVD 88		SHED:	
ASAMPLING METHOD: Dutil wall Air Petcussion 100.5 County Surface Computer County Surface County S	ORILLING CONTRACT	OR: Layne Chr	istenson, Co.		2/24/06			2/24/06		
ANAMELY RECOMMENTS CONTINGS From cyclone or as noted in remarks ANAMELY REGISTRATE OF THE SAMPLING METHOD. Cuttings from cyclone or as noted in remarks HAMMER WEIGHT: NA DROP: NA RESPONSIBLE PROFESSIONAL: REG. NO. G. Rees SAMPLES SAMPLES SAMPLES SAMPLES SAMPLES SURface Elevation: Surface Elevation: Surface Elevation: Surface Elevation: Social Surface Samples Surface Elevation: Social Surface Samples Surface Samples Social Surface Samples Social Surface Samples Social Surface Samples Surface Samples POORLY GRADED GRAVEL with SAND (GP): grayish brown (10YR 8/2), moist, ~85% gravel, ~15% fine to coarse sand, trace fines POORLY GRADED GRAVEL with SAND (GP): grayish brown (10YR 8/2), moist, ~85% gravel, ~15% fine to coarse sand, trace fines POORLY GRADED GRAVEL with SAND (GP): grayish brown (10YR 8/2), moist, ~85% gravel, ~15% fine to coarse sand, trace fines	ORILLING METHOD:	Dual Wall Air F	ercussion		100.5			l l		
AdMAER WEIGHT: NA DROP: DROP: NA DROP:	ORILLING EQUIPMEN	T: Foremost Dr	ills AP-1000		WATER	N				
DROP: NA G. Rees 6812 SAMPLES SAMPLES Confort, moist, % by with plast density, shructure, commentation, react, wirful ge, inter. Surface Elevation: 567.78 ft msl (NAVD 88) Ali knilfed to 5 feet below ground surface (bgs) by BC' Environmental on 2/22/06 1 - 8/3	SAMPLING METHOD:	Cuttings from	cyclone or as noted in rema	arks	K. Zeiler/P	. Jeff	ers	<u></u>		
NAME (USCS): color, moist, % by w. inject density, structure, coementation, react, with (1,9 ce, inter.) Surface Elevation: 567.76 ft msl (NAVD 88) -3" asphalt -4" -4" asphalt -5" asp		NA	DROP: NA			LE PF	ROFESSI	ONAL:		
Air knifed to 5 feet below ground surface (pgs) by BC* Environmental on 2/22/06 1 'and 2.5' samples collected from sidewalls boring, and 5' sample with a hand auger on 2/22/06 Drilled to 100.5' bgs with casing and hammer bit Lithology assessed from cuttings collected through the cyclone POORLY GRADED GRAVEL with SAND (GP): grayish brown (10VR 5/2), moist, ~85% gravel, ~15% fine to coarse sand, trace fines POORLY GRADED GRAVEL with SAND (GP): grayish brown (10VR 5/2), moist, ~85% gravel, ~15% fine to coarse sand, trace fines		NAME (USC	S): color, moist, % by wt., plast.	density, structu inter.	re,		PID ADING ppm)	RI	EMARKS	
Air knifed to 5 feet below 1	Sar Sar 6 in	Surface Elevation	: 567.78 ft msl (NAVD 88)			11	RE			
КМ	05- 1 2- - PIZB- 05- 2 5	POORLY G (10YR 5/2), trace fines	moist, ~85% gravel, ~15% find the state of t	race fines				ground su BC² Enviro 2/22/06 1' and 2.5' collected f boring, an a hand au Drilled to casing and Lithology cuttings co	rface (bgs) by conmental on samples from sidewalls of d 5' sample with ger on 2/22/06 from bit assessed from bilected through	
	14	<u> </u>							RMRK3	
		//X Geo	matrix Consultants		Pi	roject	No. 7190.	.005.0	Page 1 of 7	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-05 (cont'd) SAMPLES Blows/ F DESCRIPTION REMARKS T NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued PIZB 15 05-15 16 17 ~70% gravel, ~30% fine to coarse sand, trace fines 18 19 20 05-20 21 22 ~60% gravel, ~40% fine to coarse sand, trace fines 23 24 PIZB 25 05-25 26 27 -65% gravel, ~35% fine to coarse sand, trace fines 28 29 PIZB 05-30 RMRK3 **Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 7

PROJE		Az	usa a	VIRWINDALE STUDY AREA and Irwindale, California	Log of Boring No. PIZB-05 (cont					
DEPTH (feet)	Sample S No.	Sample 3		DESCRIPTION NAME (USCS): color, moist, % by wt., plast, of cementation, react, w/HCl, geo. if	density, structure, nter.		PID READING (ppm)	REMA	RKS	
				POORLY GRADED GRAVEL with SAND	(GP): continued .					
32-										
32-				100 Mary 1-16 h						
22				yellowish brown (10RY 5/4), ~55% grave coarse sand, trace fines	I, ~45% fine to					
33-				•						
34-						-				
J-1 										
35-	PIZB-					1				
	05- 35									
36-								•		
_										
37-										
_				POORLY CRAPED CRAVEL (CD)	(40)(0.5(0)					
38-				POORLY GRADED GRAVEL (GP): brown ~95% gravel, ~5% fine to coarse sand, tra	n (10YR 5/3), moist, ce fines					
39-										
-						-				
40-	PIZB- 05-									
-	40					-				
41-						-				
-				·		- -				
42-						-				
-	'			POORLY GRADED GRAVEL with SAND	GP): brown					
43-				(10YR 5/3), moist, ~70% gravel, ~30% fine trace fines	e to coarse sand,					
44										
44-										
45-	PIZB-									
45-	05-				•					
46-	45									
7 0 -										
47-								*	•	
-				~60% gravel, ~40% fine to coarse sand, tr	ace fines		}			
48-				The grants, 1078 line to coalse saile, it						
				705-					RMRI	
				Geomatrix Consultants		Project	No. 7190 005.0	Pag	e 3 of 7	

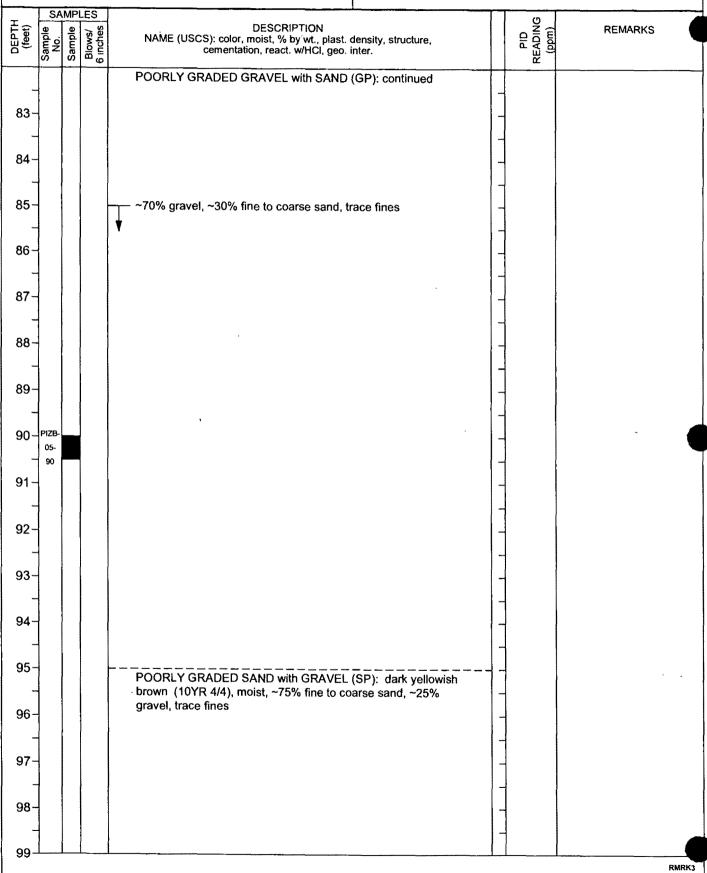
Log of Boring No. PIZB-05 (cont'd)



66- 67- 68- 69- 70-PIZB- 05- 70- 71- 72- 73- 74- 75- 76- 76- 77- 78- 79- 80-PIZB- 05-	WINDALE STUDY AREA I Irwindale, California	Log of Boring No. PIZB-05 (cont'd)						
66- 67- 68- 69- 70- PIZB- 05- 70 71- 72- 73- 74- 75- 76- 77- 78- 79- 80- PIZB- 05-	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. of cementation, react. w/HCl, geo. i	density, structure, nter.	QIA	(ppm)	REMARKS			
05-	NAME (USCS): color, moist, % by wt., plast. o	(GP): brown e to coarse sand,	QIA		and contact at 6			
81 - 80			-		·			
82					RMR			

PROJECT: AZUSA/IRWINDALE STUDY AREA
Azusa and Irwindale, California

Log of Boring No. PIZB-05 (cont'd)



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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-05 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION Sample REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued 100-PIZB-Boring backfilled with 100 bentonite chips and Bottom of boring at 100.5 ft bgs continuously hydrated 101 Surface patched with asphalt 102-103~ 104-105-106-107-108-109-110-111-112-113-114-115-116 RMRK3 **Geomatrix Consultants** Project No. 7190.005.0 Page 7 of 7

-RUJECT.			IRWINDALE ST Ind Irwindale, Ca					ng No. F	PIZB-06
BORING LO	CAT	ΓΙΟΝ	PerkinElmer	ì			DATUM: (NAVD 8	8)	
ORILLING C	ON	TRACT	ror. Layne Chris	stenson, Co.		TARTED		DATE FINIS 2/23/06	SHED
						DEPTH (ft)·	MEASURIN	IG POINT
DRILLING N	1ETI	HOD.	Duai Wall Air Pe	rcussion/Air Rotary	100.5			Ground s	
DRILLING E	QU	IPMEN	T. Foremost Drill	s AP-1000/Ingersoll-Rand TH6	0 DEPTH WATER		FIRST NA	NA	24 HRS. NA
SAMPLING	ME	THOD:	Cuttings from c	yclone or as noted in remarks	LOGGE K. Zei				
HAMMER V	/EIG	HT:	NA	DROP: NA	RESPO G. Re		PROFESSI	ONAL	REG NO. 6612
-	$\overline{}$	ES		DESCRIPTION			<u>0</u>		
DEPTH (feet) Sample No.	Sample	Blows/ 6 inches	NAME (USCS	color, moist, % by wt., plast density cementation, react. w/HCl, geo inter	, structure,		PID READING (ppm)	RE	MARKS
o s	Sa	B)	Surface Elevation:	566.50 ft msl (NAVD 88)			2		
			~3" asphalt					1	o 5 feet below
1 PIZB-						-		ground sur BC ² Enviro	face (bgs) by nmental
06-			,					1' and 2.5'	samples
,] '			•					collected fr	om sidewalls o
2- PIZB-						-]	a hand aug	d 5' sample with ger
06-						~		Daillad to 5	6' bgs with 5"
3- 25						-		casing and	I rotary bit
1						-	1		y casing and n 56' bgs to
4-						-	1	100.5' bgs	with 9" casing
1						-	-	and hamm	
5 - PIZB- 06-						-	1		assessed from ollected through
- 5						-	1	the cyclon	
6-						-	-		
4				ADED GRAVEL with SAND (GP):			-		
7-			(2.5Y 5/2), m	oist, ~85% gravel, ~15% fine to coa	arse sand, trac	€ .	-		
_ PIZB-			▼ ~85% fine to	coarse sand, ~15% gravel, trace file	nes		4		
8 75						1.	4		
4							1		
9-			POORLY GR	RADED GRAVEL (GP): grayish bro	wn (2.5Y 5/2),		4		
			moist, ~95%	gravel, ~5% fine to coarse sand, tr	ace fines		_		
10-PIZB									
06-									
10									
11-									
12-									
1					•		1		
13-							1		
+							1		
14		<u> </u>					<u> </u>	1	RMRI
			// Geom	natrix Consultants		Proje	ct No. 7190	0.005.0	Page 1 of 7

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-06 (cont'd) SAMPLES PID READING **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL (GP): continued 15-16 17 POORLY GRADED GRAVEL with SAND (GP): grayish brown 18 (2.5Y 5/2), moist, ~85% gravel, ~15% fine to coarse sand, trace 19 PIZB 20 06-20 21 22-~65% gravel, ~35% fine to coarse sand, trace fines 23. 24-25-06-25 26 27 28-29 30 06-RMRK3 **Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 7

		AZ	usa a	nd Irwindale, California	Log of Boring No. PIZB-06 (cont				
(feet)	Sample S No.	Je Be		DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density	v. structure	PID READING (ppm)	REMARKS		
۳	Sar	Sample	Blows/ 6 inches	cementation, react. w/HCl, geo. inter.	y, ou dotalo,	REAI			
				POORLY GRADED GRAVEL with SAND (GP):	continued				
_					-				
32-					-	1 1			
-			-	~55% gravel, ~45% fine to coarse sand, trace f	ines -	-			
33-				*	-	1			
-					-	1			
34-					-	4 (
-					-	_	,		
35-	PIZB- 06-			•	-	4.			
_	35]	•] -				
36-					-				
_					-				
37-					-				
_			-]			
38-				POORLY GRADED SAND with GRAVEL (SP): (10YR 5/2), moist, ~70% fine to coarse sand, ~:	grayish brown 30% gravel. -				
-			1	trace fines]_]			
39-					_	<u>}</u>			
_]			
40-	PIZB-								
_	06- 40			•					
41 –]			
1 2-]			
'' _					-	1			
43-			ſ	POORLY GRADED GRAVEL with SAND (GP):	grayish brown	1			
+J"				(2.5Y 5/2), moist, ~80% gravel, ~20% fine to co	arse sand, trace	1.			
					} -	1			
14 –					-	†			
					-	 			
45 –	PIZB- 06-				-	┥			
-	45				-	-			
46-					-	1			
-					[-				
47 –					-	-			
-			}	POORLY GRADED SAND with SILT (SP-SM):					
48-	L				see next page				

Project No. 7190 005.0

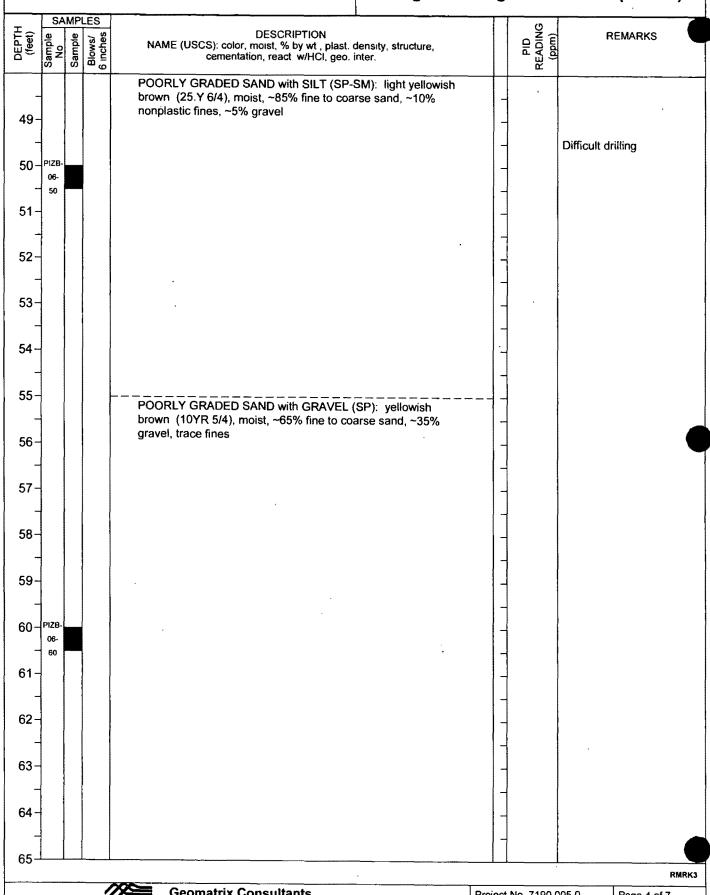
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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California

Log of Boring No. PIZB-06 (cont'd)

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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PIZB-06 (cont'd) SAMPLES DESCRIPTION
NAME (USCS): color, moist, % by wt., plast density, structure, cementation, react. w/HCl, geo. inter. REMARKS POORLY GRADED GRAVEL with SAND (GP): brown (10YR 5/3), moist, ~85% gravel, ~15% fine to coarse sand, trace fines 66 67 68-69 70-PIZB 06-71 72-73-74-75yellowish brown (10YR 5/4), ~60% gravel, ~49% fine to coarse sand, trace fines 76-77 78-79-80-81 82 RMRK3 **Geomatrix Consultants**

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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California

Log of Boring No. PIZB-06 (cont'd)

Log of Boring N							NO. PI	ZB-06	(cont'd)
_	SA	MPI				ТТ	(3		
DEPTH (feet)	Sample No.	Sample	Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. d cementation, react. w/HCl, geo. ir	ensity, structure, nter.		PID READING (ppm)	F	REMARKS
				POORLY GRADED GRAVEL with SAND (GP): continued	++			
-	1			•		-			
83-	1								
_									
84-		,							
•									
85-	1			POORLY GRADED SAND with GRAVEL (SP): dark vellowish	\dashv			
-	1			brown (10YR 4/4), moist, ~75% fine to coa	erse sand, ~25%	14			
86-				gravel, trace fines					
87-	1								
-									
88-									
						11			
89-	1								
-	{ '				•				
90-	PIZB-			•					4
00	06-								
_	90								
91-						-		ļ	
-									
92-									
02									
-									
93-						14	1		
_									
94-									
J-7						7			
-	1					14			
95-				~65% fine to coarse sand, ~35% gravel, tra	ace fines	-			
_				♥				,	
96-]								
30						١٦			
-	1 !	,				14			
97-									
_									
98-									
90-								1	
-						-			_
99-	L							L	
				200-m					RMRK3
				Geomatrix Consultants	Pr	oject	No. 7190.0	005.0	Page 6 of 7

		Az	usa an	RWINDALE STUDY AREA d Irwindale, California	Log of Bo	Log of Boring No. PIZB-06 (cont'd)						
г		MPL					g					
(feet)	Sample No.	Sample	Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast cementation, react. w/HCl, geo	density, structure, inter.		PID READING (ppm)	REMARKS				
				POORLY GRADED SAND with GRAVE	L (SP): continued		11.000					
00-	PIZB-											
-	06- 100		_			_		Boring backfilled with bentonite chips and				
01-				Bottom of boring at 100.5 ft bgs		14		continuously hydrated Surface patched with				
_								asphalt				
02-		i				-						
						-						
03-						1-1						
^4						-						
04-												
05-						-						
05_		-										
06-		İ										
-			1									
07-												
_	.``					14						
-80						-						
-						-						
09-												
						-						
10~						1-1						
11-						-						
	·					17						
12-												
13-						.]	*					
_												
14-												
15-						1-1						
-						-						
16-												

Project No. 7190.005.0

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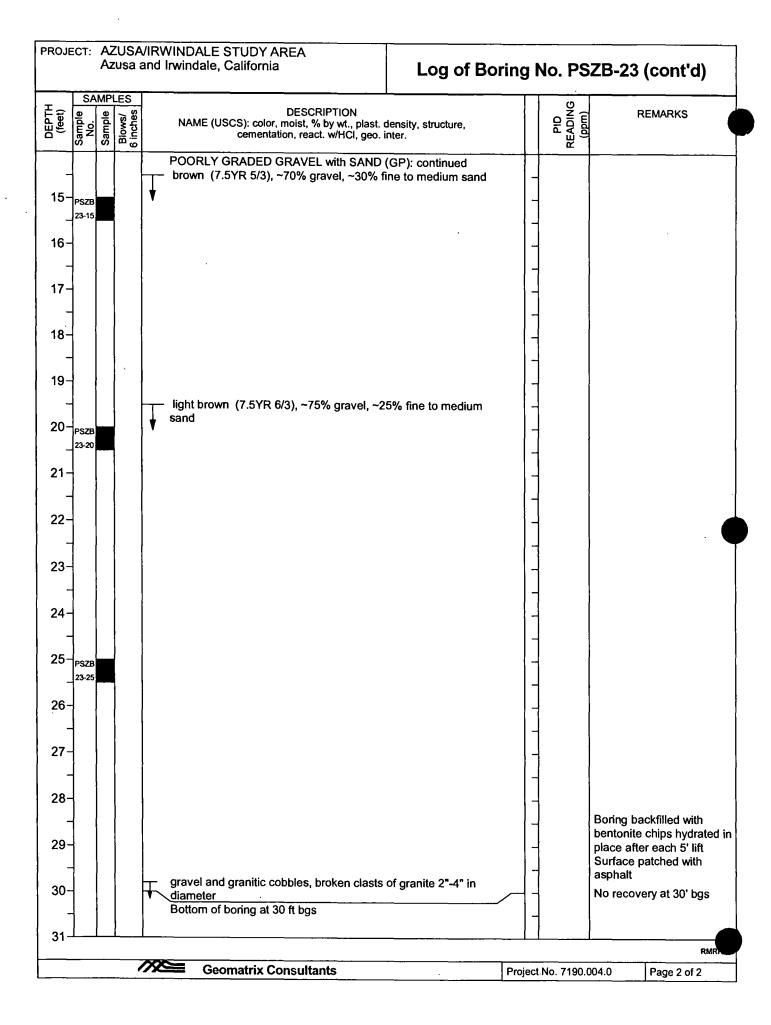
PROJECT: AZUSA/IRWINDALE Azusa and Irwindale		Logo	f Boring	g No. P	SZB-21
BORING LOCATION: PerkinElme	r	ELEVATION AI 569.08 ft ms		8)	
DRILLING CONTRACTOR: Layne	Christenson, Co.	DATE STARTE 3/21/05		DATE FINI 3/21/05	SHED:
DRILLING METHOD: Dual Wall A	ir Percussion	TOTAL DEPTH	NG POINT: surface		
DRILLING EQUIPMENT: Foremosi	t Drills AP-1000	DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA
SAMPLING METHOD: Cuttings fro	om cyclone	LOGGED BY: P. Jeffers			
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE G. Rees	PROFESSI	ONAL:	REG. NO. 6612
Samples Sample	DESCRIPTION USCS): color, moist, % by wt., plast. density, struct cementation, react. w/HCl, géo. inter.	ure,	PID READING (ppm)	RI	EMARKS
σ σ Surface Eleva	ation: 569.08 ft msl (NAVD 88)		RE		
	naltY GRADED GRAVEL with SAND (GP): dark to all to a sand a	rown		below grou	ered to 3 feet and surface (bgs) 0.5' bgs with 9" I hammer bit
2- 				Lithology a	assessed from ollected through
	BRAVEL with SAND (GM): light gray (N 7/), maravel, ~20% fine sand, ~ 20% nonplastic fines	oist,			
5-pszB-21-5			-		
7-			-		
8- ^{21-7.5}				<u> </u>	
9- light bro	own (7.5YR 5/4)		-	:	
10 - PSZB-					
11-					
POORI	Y GRADED GRAVEL with SAND (GP): light of moist, ~80% gravel, ~20% fine to medium sand		 - 		
14		· 1		204.2	RMRK3
	Seomatrix Consultants	Proj	ect No. 7190.	.004.0	Page 1 of 2

PROJE	ECT:			/IRWINDALE STUDY AREA and Irwindale, California	Log of Borir	ng N	lo. PS	ZB-21 (cont'd)
DEPTH (feet)	Sample S No.	Sample 14	Blows/ III 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. den cementation, react. w/HCl, geo. inte	sity, structure,		PID READING (ppm)	REMARKS
	\vdash	$ \cdot $	Ť	POORLY GRADED GRAVEL with SAND (G	P): continued	+		
-	1			•	•	-		
15-	PSZB-					-		
_	21-15							
16-	ļ				•			
47		ÌÌ						
17-	1							
-	1							
18-	1							
-	1							
19-	-					-	į	
-	┨.			light brown (7.5YR 5/4), ~85% gravel, ~15%	medium sand	-		
20-] PSZB-			♥				
_	21-20					_		
21-								
۷,								
-	1]		
22-	1	'				-		
•	1					_		
23	-	İ		POORLY GRADED SAND with GRAVEL (S (10YR 5/3), moist, ~85% fine to medium sar		-		
	\dashv			(101K 3/3), moist, ~63% line to medium sai	iu, ~15% graver]-		
24	┥					-		
	-					-		
25	_ PSZB					_		
	21-25			,		_		
26								
20			İ				Ì	
	1					-	1	
27	1	1				-	1	
	7			SILTY GRAVEL with SAND (GM): light gray			1	
28	-			~70% gravel, ~15% fine sand, ~15% nonpl	astic fines	-	1	
	4					-	-	
29						-	-	Boring backfilled with
	4					-	-	bentonite chips hydrated
30	PSZE		1					place after each 5' lift Surface patched with
	21-3					┨.		asphalt
31				Bottom of boring at 30.5 ft bgs				
								RMRK
				Geomatrix Consultants		Projec	t No. 7190.	.004.0 Page 2 of 2

	/IRWINDALE STUDY A		Log	of Borin	g No. P	SZB-22
BORING LOCATION:	PerkinElmer			AND DATUM: nsl (NAVD 8	8)	
DRILLING CONTRAC	TOR: Layne Christensor	n, Co.	DATE START 3/21/05		DATE FINIS 3/21/05	SHED:
DRILLING METHOD:	Dual Wall Air Percussion	on	TOTAL DEPT	TH (ft.):	MEASURIN Ground s	
DRILLING EQUIPMEN	T: Foremost Drills AP-1	000	DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA
SAMPLING METHOD	Cuttings from cyclone		LOGGED BY P. Jeffers			1.33
HAMMER WEIGHT:	NA DROP	: NA		LE PROFESSI	ONAL:	REG. NO. 6612
(feet) (feet) (ample Solumble	NAME (USCS): color,	DESCRIPTION , moist, % by wt., plast. density, tion, react. w/HCl, geo. inter.		PID READING (ppm)	RE	MARKS
DEPTH (feet) Sample No. Sample Blows/ 6 inches	Surface Elevation: 569.40	· · · · · · · · · · · · · · · · · · ·	,	REA 0		
1- PSZB 22-1 2- PSZB 22-25 4- S PSZB 22-5 6- S PSZB 22-5 10- PSZB 22-10 11- S PSZB 22-10	(2.5YR 3/2), moist, ~ SILTY GRAVEL with ~70% gravel, ~15%	GRAVEL with SAND (GP): 675% gravel, ~25% medium s SAND (GM): light gray (N fine sand, ~15% nonplastic f gravel, ~15% fine sand	7/), moist, înes		Drilled to 3 casing and	red to 3 feet nd surface (bgs) 0.5' bgs with 9" hammer bit ssessed from lected through by
13-						
14					<u> </u>	RMRK3
	Geomatrix C	onsultants	Pr	oject No. 7190	.004.0	Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-22 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION **REMARKS** NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. gray (N 6/), ~70% gravel, ~30% fine sand 15 PSZB 22-15 16 17 SILTY GRAVEL (GM): light brown (7.5YR 6/3), moist, ~70% 18 gravel, ~15% fine to medium sand, ~15% nonplastic fines 19 20 PSZB 22-20 21 22-23 24 25-POORLY GRADED GRAVEL with SAND (GP): medium brown No recovery at 25' bgs (7.5YR 4/4), moist, ~80% gravel, ~20% fine to medium sand 26 27 28 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 Surface patched with PSZB asphalt Bottom of boring at 30.5 ft bgs RMRK. //X= **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA Azusa a	/IRWINDALE S			Log	of	Boring	g No. P	SZB-23
BORING LOCATION:	PerkinElmer .			ELEVATION 568.45 ft m			87	
DRILLING CONTRAC	TOR: Layne Chr	istenson, Co.		DATE START 3/21/05			DATE FINI 3/21/05	SHED:
DRILLING METHOD:	Dual Wall Air P	ercussion		TOTAL DEPT	r H ((t.):	MEASURII	NG POINT:
DRILLING EQUIPMEN	VT: Foremost Dr	lls AP-1000		30.0 DEPTH TO	•	FIRST	Ground s	24 HRS.
				WATER LOGGED BY		NA	<u>NA</u>	NA
SAMPLING METHOD				P. Jeffers RESPONSIB	IFF	ROFESSIO	ONAI ·	REG. NO.
HAMMER WEIGHT:	NA	DROP: NA		G. Rees	7			6612
(feet) Sample No. Sample Sample Blows/ Biows/ 6 inches	NAME (USC	DESCRIPTION S): color, moist, % by wt., plast, cementation, react, w/HCl, geo.	density, structu inter.	re,		PID READING (ppm)	RI	EMARKS
Sar Sar 6 in	Surface Elevation	: 568.45 ft msl (NAVD 88)				RE		ered to 3 feet
1- PSZB 23-1 23-1 23-1 23-1 23-1 23-1 23-1 23-1	(7.5YR 3/2), light brown sand	RADED GRAVEL with SAND moist, ~70% gravel, ~30% fi	ne to medium	edium			Drilled to 3 casing and Lithology a cuttings of the cyclon	and surface (bgs) 30' bgs with 9" 4 hammer bit assessed from bilected through e
14								RMRK:
· .	Geo	matrix Consultants		Pr	ojec	t No. 7190.	004.0	Page 1 of 2



	IRWINDALE STUDY AREA nd Irwindale, California	Log	of Boring	No. PS	ZB-24
BORING LOCATION:	PerkinElmer .	567.06 ft r	AND DATUM: nsl (NAVD 88		
DRILLING CONTRACT	OR: Layne Christenson, Co.	DATE STAR 3/22/05	TED:	DATE FINISH 3/22/05	_
DRILLING METHOD:	Dual Wall Air Percussion	TOTAL DEP		MEASURING Ground sur	face
DRILLING EQUIPMEN	T: Foremost Drills AP-1000	DEPTH TO WATER	FIRST	COMPL. NA	24 HRS. NA
SAMPLING METHOD:	Cuttings from cyclone	P. Jeffers			- BEG NO
HAMMER WEIGHT:		G. Rees	BLE PROFESSIO	JNAL: j	REG. NO. 6612
DEPTH (feet) Sample No. Sample Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. dense cementation, react. w/HCl, geo. inter	sity, structure,	PID PID (ppm)	REM	ARKS
Sa Sair	Surface Elevation: 567.06 ft msl (NAVD 88)				
1 - _{PSZB} - 24-1			- - - -	·	d surface (bgs) 5' bgs with 9"
2- 	· 			Lithology ass cuttings colle the cyclone	sessed from ected through
4- 5- _{BS78}	POORLY GRADED GRAVEL with SAND (GF (10YR 3/3), moist, ~85% gravel, ~15% mediu				i
5-PSZB 24-5					
7-					
8-					
9-					
10- _{PSZB}	brown (10YR 5/3)				
11-					
12-					
13-	POORLY GRADED SAND with GRAVEL (SI brown (10YR 5/4), moist, ~85% medium to c gravel		- - -		
14-1-1-			<u></u>	<u> </u>	RMRK3
	Geomatrix Consultants	Р	roject No. 7190.	004.0 F	Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-24 (cont'd) SAMPLES PID READING (ppm) REMARKS DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued 15-PSZB 24-15 16 17-SILTY SAND with GRAVEL (SM): yellowish brown 18 (10YR 5/4), moist, ~60% fine to coarse sand, ~15% gravel, ~15% nonplastic fines 19 20 PSZB 21 22-23 24 25-PSZB 24-25 26 27 28 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 Surface patched with PS7B asphalt Bottom of boring at 30.5 ft bgs RMRK **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA/IRWII Azusa and Irv	NDALE STUDY AREA vindale, California		Log	of Boring	g No. PS	ZB-25
BORING LOCATION: Perki			ELEVATION A 564.22 ft ms		 B)	
DRILLING CONTRACTOR:	Layne Christenson, Co.		DATE STARTE 3/29/05		DATE FINIS 3/29/05	HED:
DRILLING METHOD: Dual	Wall Air Percussion		TOTAL DEPTH 30.5		MEASURING Ground Su	ırface
DRILLING EQUIPMENT: For	remost Drills AP-1000	-	DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA
SAMPLING METHOD: Cutti	ings from cyclone		LOGGED BY: P. Jeffers			
HAMMER WEIGHT: NA	DROP: NA		RESPONSIBLI G. Rees	E PROFESSIO	ONAL: 	REG. NO. 6612
Sample Sample Sericet) Sample Sericet No. Sample Blows/ Seriches Seriches	DESCRIPTION NAME (USCS): color, moist, % by wt., cementation, react. w/HCl,	plast, density, structure	е,	PID READING (ppm)	REM	MARKS
Surfa	ce Elevation: 564.22 ft msl (NAVD 88)			RE	Hand auger	<u>-</u>
1 — PSZB	POORLY GRADED GRAVEL with S. 7.5YR 3/4), moist, ~65% gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~35 gravel, ~36 gravel, ~36 gravel, ~36 gravel, ~36 gravel, ~37 gravel, ~37 gravel, ~37 gravel, ~38 g	5% medium to coars	e sand		Drilled to 30 casing and l	ed surface (bgs) 2.5' bgs with 9" hammer bit Esessed from ected through
14					<u> </u>	RMRK3
///	Geomatrix Consultants		Proj	ect No. 7190.	004.0	Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-25 (cont'd) SAMPLES PID READING **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued ~60% gravel, ~40% fine to medium sand 15-PSZB 25-15 16 17 18 19 -85% gravel, ~15% fine to medium sand 20 PSZB 25-20 21 22 23 24 POORLY GRADED SAND with GRAVEL (SP): light brown (7.5YR 6/3), moist, ~60% fine to medium sand, ~40% gravel 25 PSZB 25-25 26 27 POORLY GRADED GRAVEL with SAND (GP): light brown 28 (7.5YR 6/3), moist, ~65% gravel, ~35% fine to medium sand 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 PSZB Surface patched with asphalt Bottom of boring at 30.5 ft bgs RMRK **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

BORING LOCATION PerkinElmer	PROJECT: AZUSA Azusa	VIRWINDALE ST and Irwindale, Ca			Log	of Boring	g No. P	SZB-26
DRILLING CONTRACTOR: Layne Christenson, Co. DATE STARTED 3/30/05 3/			**************************************				8)	
DRILLING METHOD: Dual Wall Air Percussion TOTAL DEPTH (R.): 30.5 Ground surface COMPL. 24 HRS. ANA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA N	DRILLING CONTRAC	CTOR: Layne Chri	stenson, Co.		DATE START		DATE FINE	SHED:
DRILLING EQUIPMENT: Foremost Drills AP-1000 DEPTH TO FIRST (AN A) A A RS. NA NA NA NA NA NA NA NA NA NA NA NA NA	DRILLING METHOD:	Dual Wall Air Po	ercussion		TOTAL DEPT	H (ft.):	MEASURIN	
SAMPLING METHOD. Cuttings from cyclone HAMMER WEIGHT: NA DROP: NA RESPONSIBLE PROFESSIONAL: REG. N G. Rees SAMPLES DRILLING EQUIPME	NT: Foremost Dri	lls AP-1000		DEPTH TO		COMPL.	24 HRS.	
HAMMER WEIGHT: NA DROP: NA RESPONSIBLE PROFESSIONAL: REG. N. 6612 SAMPLES	SAMPLING METHOD	Cuttings from o	cyclone	. 1			<u> </u>	
SAMPLES SAMPLES NAME (USCS): color, moist, % by wt., plast, density, shucture, comentation, react, with Ci. geo, inter- comentation, react, with Ci. geo, inte	HAMMER WEIGHT:	NA	DROP: NA		RESPONSIBL	E PROFESSI	ONAL:	REG. NO.
-4 asphall POORLY GRADED GRAVEL with SAND (GP): dark brown (7.5YR 3/4), moist, -60% gravel, -40% medium to coarse sand Poze	<u> </u>	NAME (USC	S): color, moist, % by wt., plast, do	ensity, structur ter.	4	PID ADING	RE	
PORLY GRADED GRAVEL with SAND (GP): dark brown (7.5YR 3/4), moist, ~60% gravel, ~40% medium to coarse sand PEZE 3-2-1 PEZE 3-2-1 PEZE 2-1 PEZE 3-2-1 PEZ	San San San San San San San San San San							
R	2-1 2	(7.5YR 3/4),	moist, ~60% gravel, ~40% med	dium to coars	se sand		Drilled to 3 casing and Lithology a cuttings co	0.5' bgs with 9" I hammer bit assessed from
R	14		The state of the s					
Geomatik Consultants [110]cc.10.110.004.0 [Fage 1012		// S Geor	natrix Consultants		Pro	oject No. 7190	.004.0	Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-26 (cont'd) SAMPLES PID READING DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued ~60% gravel, ~40% fine to medium sand 15 PSZB 26-15 16 17 18 19 20 PSZB 26-20 21 22 POORLY GRADED SAND with GRAVEL (SP): light brown (7.5YR 6/4), moist, ~75% fine to medium sand, ~25% gravel 23 24 25 PSZB 26-25 26 27 28 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 Surface patched with asphalt Bottom of boring at 30.5 ft bgs 31 **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA/IRWINDAI Azusa and Irwinda		Log	of Boring	g No. PS	ZB-27
BORING LOCATION: PerkinElm		ELEVATION A 562.91 ft m	ND DATUM: sl (NAVD 88	8)	
DRILLING CONTRACTOR: Layne	Christenson, Co.	DATE START 3/23/05	ED:	DATE FINIS 3/23/05	
DRILLING METHOD: Dual Wall	Air Percussion	TOTAL DEPT 20.5	H (ft.):	MEASURING Ground su	
DRILLING EQUIPMENT: Foremo	st Drills AP-1000	DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA
SAMPLING METHOD: Cuttings 1	rom cyclone	LOGGED BY: P. Jeffers			
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBL G. Rees	E PROFESSIO	ONAL:	REG. NO. 6612
SAMPLES PLACE SAMPLES NAME SO NO SIGNAS NAME SO NO SIGNAS SO	DESCRIPTION (USCS): color, moist, % by wt., plast. density cementation, react. w/HCl, geo. inter.	y, structure,	PID READING (ppm)	REM	MARKS
Ω s Surface Ele	vation: 562.91 ft msl (NAVD 88)		RE)		
1 - PSZB 27-1	Ty GRADED GRAVEL with SAND (GP): 5/3), moist, ~70% gravel, ~30% medium and (N 7/) gravel, ~15% fine to medium sand GRAVEL with SAND (GM): brown (7.5 gravel, ~15% fine to medium sand, ~15%	to coarse sand YR 5/4), moist,		below groun Drilled to 20 casing and Lithology as	sessed from ected through
13-					
14	······································				
//	Geomatrix Consultants	To.		004.0	RMRK3 Page 1 of 2
	Ocomatic Consulatios	Pit	JGG 190. 7 180.	U.FUU.	aye I UI Z

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-27 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. SILTY GRAVEL with SAND (GM): continued 15 | | PSZB 27-15 16 17 18 19 Boring backfilled with bentonite chips hydrated in place after each 5' lift PSZB Surface patched with POORLY GRADED SAND with GRAVEL (SP): brown asphalt 27-20 (7.5YR 5/3), moist, ~70% fine to medium sand, ~30% gravel Bottom of boring at 20.5 ft bgs 21 22-23 24 25-26 27 28 29 30 31 RMRK /X **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA/I Azusa ar	RWINDALE ST			Log	of E	3oring	No. PS	SZB-27A		
BORING LOCATION: [-	•	ELEVATION AND DATUM: 562.89 ft msl (NAVD 88)						
DRILLING CONTRACTO	OR: Layne Chris	stenson, Co.		DATE STAR 3/24/05			DATE FINE 3/24/05	SHED:		
DRILLING METHOD:	Dual Wall Air Pe	rcussion		TOTAL DEP	TH (fi	t.):		NG POINT:		
DRILLING EQUIPMENT	Γ: Foremost Drill	s AP-1000		DEPTH TO WATER		IRST VA	COMPL.	24 HRS. NA		
SAMPLING METHOD:	Cuttings from cy	yclone		LOGGED BY			1147	TINA .		
HAMMER WEIGHT:	NA	DROP: NA		RESPONSIE G. Rees	BLE P	ROFESSIO	ONAL:	REG. NO. 6612		
(feet) (feet) (ample No. Salows/ Silows/ NAME (USCS	DESCRIPTION i): color, moist, % by wt., plast mementation, react. w/HCl, geo	t. density, structu			PID READING (ppm)	RE	EMARKS			
DEPTH (feet) Sample No. Sample Blows/ B inches		562.89 ft msl (NAVD 88)			┥ [REA (P				
1- 2- 3- 4- 5- 6- 7- 8- 9- 10-							casing and	d hammer bit assessed from ollected through		
11-					-					
12-					-					
13-	×××-						i i	RMRK3		
	Geom	atrix Consultants		P	rojec	t No. 7190.	004.0	Page 1 of 2		

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California

Log of Boring No. PSZB-27A (cont'd)

Log of Borning No. F32B-27A (Cont u)				
Sample No. Sample	DESCRIPTION SO CONTROL NAME (USCS): color, moist, % by wt., plase cementation, react. w/HCl, ge	st. density, structure, o. inter.	PID READING (ppm)	EMARKS
	SEE BORING LOG PSZB-27 FOR LITI			
-		-		
5-		-		
_				
6-				
<u> </u>				
7-			· · ·	
		17		
7		17		
8-		17		
7		-		
9-		-		
-		-		
o-	POORLY GRADED GRAVEL with SAN	ID (GP): brown		
4	(7.5YR 5/2), moist, ~65% gravel, ~35%	fine to medium sand		
1-	ļ	[-]	
11	ł	14	ł	
2-				
_				
3-				
7 }				
24-		-		
-		. -		
5-PSZB		14		
27A-		1-		
26-		-		
4 {] -		
27-				
_				
28-				
~]]		
,	SILTY GRAVEL with SAND (GM): ligh	nt gray (N 7/), moist,		
29-	~70% gravel, ~15% fine to medium sa fines	na, ~15% nonplastic		ckfilled with
7				chips hydrated r each 5' lift
30- _{PSZB}			Surface p	atched with
_ 27A- 30	Bottom of boring at 30.5 ft bgs		asphalt	
31———			<u> </u>	RMR
	Geomatrix Consultants	Project	No. 7190.004.0	Page 2 of 2
		1		

PROJECT: AZUSA/IRWINDALE STU Azusa and Irwindale, Cali		Log	of Boring	g No. P	SZB-28	
BORING LOCATION: PerkinElmer		ELEVATION A 564.52 ft m		8)		
DRILLING CONTRACTOR: Layne Christ	enson, Co.	DATE START 3/24/05	ED:	DATE FINIS 3/24/05	SHED:	
DRILLING METHOD: Dual Wall Air Per	cussion	TOTAL DEPT	H (ft.):	MEASURIN	SURING POINT:	
DRILLING EQUIPMENT: Foremost Drills	30.5 DEPTH TO	FIRST	Ground s	24 HRS.		
		WATER LOGGED BY:	NA NA		<u> i NA</u>	
SAMPLING METHOD: Cuttings from cyc	ONAL:	REG. NO.				
	DROP: NA	G. Rees			6612	
SAMPLES Plant (1994) Plant (DESCRIPTION color, moist, % by wt., plast. density, structumentation, react. w/HCl, geo. inter.	ге,	PID READING (ppm)	RE	MARKS	
Surface Elevation:	564.52 ft msi (NAVD 88)		- R		red to 3 feet	
1 — PSZB 28-1	DED GRAVEL with SAND (GP): dark broist, ~60% gravel, ~40% medium to coars and a diameter	se sand		Drilled to 3 casing and Lithology a cuttings co the cyclone	nd surface (bgs) 0.5' bgs with 9" hammer bit ssessed from llected through it lling 4'-9' bgs	
			14			
13-			1+			
] -			
14			1 1	<u> </u>	RMRK3	
Geoma	atrix Consultants	Pro	ject No. 7190.	.004.0	Page 1 of 2	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-28 (cont'd) SAMPLES PID READING DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): medium brown (10YR 5/3), moist, ~70% fine to coarse sand, ~30% gravel 15. PSZB 28-15 16 17 18 19 light gray (N 7/), ~60% fine to coarse sand, ~40% gravel 20 PSZB 28-20 21 22 23 24 25-⊤PSZB 28-25 26 27 28

SILTY GRAVEL with SAND (GM): light gray (N 7/), moist, ~60% gravel, ~20% fine to medium sand, ~20% nonplastic Boring backfilled with fines bentonite chips hydrated in place after each 5' lift Surface patched with asphalt Bottom of boring at 30.5 ft bgs RMRK **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

29

30

PSZB

28-30

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale; California	Log	of Boring	g No. PS	SZB-29	
BORING LOCATION: PerkinElmer	ELEVATION A 564.26 ft m	si (NAVD 8			
DRILLING CONTRACTOR: Layne Christenson, Co.	DATE STARTED: DATE FINISHED 3/24/05 3/24/05				
DRILLING METHOD: Dual Wall Air Percussion	30.5		Ground st	urface	
DRILLING EQUIPMENT: Foremost Drills AP-1000	DEPTH TO WATER	FIRST NA	COMPL.	24 HRS. NA	
SAMPLING METHOD: Cuttings from cyclone	LOGGED BY: P. Jeffers RESPONSIBLE PROFESSION				
HAMMER WEIGHT: NA DROP: NA DESCRIPTION	G. Rees		JIVAL.	REG. NO. 6612	
SAMPLES SAMPLES DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, struct cementation, react. w/HCl, geo. inter. Surface Elevation: 564.26 ft msl (NAVD 88)	ure,	PID READING (ppm)	REI	MARKS	
Surface Elevation: 564.26 ft msl (NAVD 88)		2			
7-4" asphalt POORLY GRADED GRAVEL with SAND (GP): dark I (7.5YR 4/4), moist, ~60% gravel, ~40% medium to coa		- -	below groun	red to 2.5 feet and surface (bgs) 0.5' bgs with 9" hammer bit	
2- - - 29-25		-	Lithology as cuttings col the cyclone	ssessed from lected through	
brown (7.5YR 5/2), ~75% gravel, ~25% medium to constant and sand	oarse	-			
PSZB 29-7.5	evt nage				
POORLY GRADED SAND with GRAVEL (SP): see n	ext page	11		RMRKJ	
Geomatrix Consultants	Pro	oject No. 7190	.004.0	Page 1 of 2	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-29 (cont'd) SAMPLES PID READING DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): medium brown (10YR 5/3), moist, ~75% fine to coarse sand, ~25% gravel 15 PSZB 29-15 16 17 18 19 ~85% fine to coarse sand, ~15% gravel 20 PSZB 29-20 21 22 23 24 light gray (7.5YR 7/1) 25-PSZB 29-25 26 27 POORLY GRADED GRAVEL with SAND (GP): light gray 28 (N 7/), moist, ~80% gravel, ~20% fine to medium sand 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 PSZB Surface patched with asphalt Bottom of boring at 30.5 ft bgs RMRK

Project No. 7190.004.0

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PROJECT: AZUSA/IF Azusa and	RWINDALE ST			Log	of Boring	g No. PS	ZB-30
BORING LOCATION: P				ELEVATION A 566.30 ft m		8)	
DRILLING CONTRACTO	R: Layne Chris	stenson, Co.	•	DATE START		DATE FINIS 3/24/05	HED:
DRILLING METHOD: D	ual Wall Air Pe	rcussion		TOTAL DEPT		MEASURING Ground su	ırface
DRILLING EQUIPMENT:	Foremost Drill	s AP-1000		DEPTH TO WATER	FIRST NA	COMPL.	24 HRS. NA
SAMPLING METHOD: (Cuttings from c	yclone		LOGGED BY: P. Jeffers			
	IA	DROP: NA		RESPONSIBL G. Rees	E PROFESSI	ONAL:	REG. NO. 6612
DEPTH (feet) Sample No. Sample Blows/ Sinches Sinches	NAME (USCS	DESCRIPTION color, moist, % by wt., plast. mementation, react. w/HCl, geo.	density, structur	re, 	PID READING (ppm)	RE	MARKS
Sa Sai	Surface Elevation: ~4" asphalt	566.30 ft msl (NAVD 88)			8		ed to 2.5 feet
1 - PSZB 30-1 2 - PSZB 3-30-2.5 3 - 30-2.5 3	(7.5YR 4/4), r	ADED GRAVEL with SAND noist, ~70% gravel, ~30% m ~40% medium to coarse sa	edium to coar	se sand		Drilled to 30 casing and Lithology as	sessed from ected through
14	·		 -	<u> </u>	<u> </u>		
	Geom	natrix Consultants		Pro	ject No. 7190.	004.0	RMRK3 Page 1 of 2
			_ .		-,		-30.0.2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-30 (cont'd) SAMPLES DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued ~70% gravel, ~30% fine to medium sand 15 PSZB 30-15 16 17 18 19 POORLY GRADED SAND with GRAVEL (SP): very pale 20 brown (10YR 7/3), moist, ~75% fine to coarse sand, ~25% PSZB gravel 30-20 21 22 23 POORLY GRADED GRAVEL with SAND (GP): very pale 24 brown (10YR 7/3), moist, ~65% gravel, ~35% fine to medium sand . 25 30-25 26 27 28 POORLY GRADED SAND with GRAVEL (SP): brown 29 (7.5YR 4/3), moist, ~70% fine to coarse sand, ~30% gravel Bonng backfilled with bentonite chips hydrated in place after each 5' lift 30 Surface patched with asphalt Bottom of boring at 30.5 ft bgs **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

	/INDALE STUDY AREA rwindale, California	Log	of Borin	g No. PSZB-31
BORING LOCATION: Perk	kinElmer		AND DATUM:	0)
DDILLING CONTRACTOR	Lowe Children Co	DATE STAR	nsl (NAVD 8 TED:	DATE FINISHED:
DRILLING CONTRACTOR:	Layne Christenson, Co.	3/25/05	F1176 \.	3/25/05 . MEASURING POINT:
DRILLING METHOD: Dua	Wall Air Percussion	TOTAL DEP 30.5	1 H (n.):	Ground surface
DRILLING EQUIPMENT: Fo	oremost Drills AP-1000	DEPTH TO WATER	FIRST	COMPL. 24 HRS. NA NA
SAMPLING METHOD: Cut	ttings from cyclone	LOGGED BY	′ :	
HAMMER WEIGHT: NA	DROP: NA		BLE PROFESSI	ONAL: REG. NO. 6612
DEPTH (feet) Sample No. Sample Blows/ 6 inches Ginches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. den cementation, react. w/HCl, geo. inter	sity, structure,	PID READING (ppm)	REMARKS
San San Snu	face Elevation: 566.92 ft msl (NAVD 88)		- J	· .
	~4" asphalt			Hand augered to 2 feet
	POORLY GRADED SAND with GRAVEL (SP (7.5YR 3/2), moist, ~60% fine to medium sand			below ground surface (bgs)
1 PSZB	(1.0) N 0/2), most, 00% mo to mostam sain	u, 4070 giaroi	-	Drilled to 30.5' bgs with 9"
_ 31-1	•		-	casing and hammer bit
2-			1-1	Lithology assessed from
PSZB BEE			14	cuttings collected through
3-31-2.5			-	the cyclone
4-				
				1
5- _{PSZB}			17	
- 313				
6-				
			14	
7-			-	
PSZB PSZB			44	
8-31-7.5	POORLY GRADED GRAVEL with SAND (GI (2.5Y 7/1), moist, ~75% gravel, ~25% fine to			
9-				
10- _{PSZB}				
31-10			-	
11-			1-1	
] -	
12-				
12				
13-				
		,	11	
14				RMRK3
//%	Geomatrix Consultants	Р	roject No. 7190	.004.0 Page 1 of 2

Azusa	and Irwindale, California	Log of Bor	ing No	o. PSZ	B-31 (cont'd)
Sample Sample Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. cementation, react. w/HCl, geo.	density, structure, inter.		PID READING (ppm)	REMARKS
	POORLY GRADED GRAVEL with SAND	(GP): continued			
-	light brown (7.5YR 6/3)		-		
5- _{PSZB}	♥		1-1		
31-15			-		
6-		•	14		
4			14		
7-					
8-	·				
°				1	
]	POORLY GRADED SAND with GRAVEL	(CD): vericed			
9-	brown (10YR 7/3), moist, ~60% fine to m		. 1	1	
1	gravel		17	-	
20- _{PSZB}			-		
31-20			1-1		
21-			1-1		
4 1 1			-	1	
22-					
					·
23-					
,]			- 17		
24-			- 17	l	
1	brown (7.5YR 4/4), ~75% fine to medius	m sand, ~25% gravel	11	***************************************	
25- _{PSZB}	\		11		
31-25			11	1	
26-	•		-	}	
4 1			14		
27-			-		
4					
28-					
4	POORLY GRADED GRAVEL with SAND	O (GP): very pale			-
29-	brown (10YR 7/3), moist, ~80% gravel, sand				
-	Saliu				Boring backfilled with bentonite chips hydrated
20				11	place after each 5' lift
30- _{PSZB}			17		Surface patched with asphalt
7 [7]	Bottom of boring at 30.5 ft bgs		71	ľ	aopiiait
31					, RMF
	Geomatrix Consultants		Project N	lo. 7190.00	04.0 Page 2 of 2

BORING LOCATION: PerkinElmer	ELEVATION AND I			
DRILLING CONTRACTOR: 1 avno Christonson Co	567 11 ft msl (N			
DBILLING CONTRACTOR: Loung Christopean Co	DATE STARTED:	(88 <u>DVAI</u>	DATE FINISH	HED.
	3/25/05	3	3/25/05	
	TOTAL DEPTH (ft.)		MEASURING	
	30.5 DEPTH TO FI		Ground su	17ace 24 HRS.
DRILLING EQUIPMENT: Foremost Drills AP-1000			NA .	NA
SAMPLING METHOD: Cuttings from cyclone	P. Jeffers			
HAMMED WEIGHT: NA LIDOD: NA	RESPONSIBLE PR G. Rees	ROFESSION	IAL:	REG. NO. 6612
SAMPLES PAGE S PAGE	е,	PID READING (ppm)	REM	MARKS
Surface Elevation: 567.11 ft msl (NAVD 88)		22		
PSZB 32-1 2- PSZB 32-2-5 4- PSZB 32-5 6- PSZB 32-7-5 8- 32-7-5		b C	elow groun Onlied to 30 easing and h	ed to 3 feet and surface (bgs) and 5' bgs with 9" and bit sessed from acted through
9- POORLY GRADED GRAVEL with SAND (GP): light gravel, ~15% fine to medium sa				
11- 12- at 12' bgs: construction debris (concrete, small metal pi	eces)			
		1		
14				RMRK3

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-32 (cont'd) SAMPLES PID READING DESCRIPTION **REMARKS** NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15-PSZB 32-15 16 17 18 POORLY GRADED SAND with GRAVEL (SP): dark brown 19 (7.5YR 3/2), moist, ~85% medium sand, ~15% gravel PSZB 21 22. 23 POORLY GRADED GRAVEL with SAND (GP): very pale 24 brown (10YR 7/3), moist, ~75% gravel, ~25% fine to medium 25 PSZB 32-25 26 27 28 29

Boring backfilled with bentonite chips hydrated in place after each 5' lift light gray (2.5Y 7/1), ~85% gravel, ~15% fine to medium sand Surface patched with asphalt Bottom of boring at 30.5 ft bgs RMRK. **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

30

PSZB

32-30

PROJECT: AZUSA Azusa a	/IRWINDALE ST			Log	of Bori	ng No. P	SZB-33		
BORING LOCATION:	PerkinElmer .				AND DATUN				
DRILLING CONTRACT	TOR: Layne Chri	stenson, Co.	D	ATE START /25/05		DATE FIN	DATE FINISHED:		
DRILLING METHOD:	Dual Wall Air Pe	ercussion	T	OTAL DEPT	'H (ft.):		NG POINT: surface		
DRILLING EQUIPMEN	IT: Foremost Dri	ls AP-1000	D	EPTH TO VATER	FIRST	COMPL.	24 HRS. NA		
SAMPLING METHOD:	Cuttings from c	cyclone	L	OGGED BY	•	<u>, , , , , , , , , , , , , , , , , , , </u>			
HAMMER WEIGHT:	NA	DROP: NA		ESPONSIB	LE PROFES	SIONAL:	REG. NO. 6612		
Sample No. Sample Blows/ 6 inches	NAME (USC	DESCRIPTION S): color, moist, % by wt., plast. cementation, react. w/HCl, geo.	density, structure, inter.		PID	(wdd	EMARKS		
Sar Sar 6	Surface Elevation:	567.50 ft msi (NAVD 88)			3	1			
1 - PSZB 33-1 2 - PSZB 33-2 5 6 - PSZB 8 - 33-7.5 - PSZB 8 - 33-7.5 - PSZB 33-10 11 - 12 - 12 - 13 - 13 - 13 - 15 - 15 - 15 - 15 - 15	(7.5YR 3/2),	RADED GRAVEL with SAND moist, ~60% gravel, ~40% file of the same o	ne to medium sa	nd		Drilled to casing an	ered to 2 feet und surface (bgs) 30.5' bgs with 9" d hammer bit assessed from ollected through ne		
	POORLY G	RADED SAND with GRAVE	L (SP): see next	page	11				
14							RMRK3		
	//X Geor	natrix Consultants		Pr	roject No. 71	90.004.0	Page 1 of 2		

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-33 (cont'd) SAMPLES PID READING (ppm) **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): brown (10YR 5/3), moist, ~75% fine to medium sand, ~25% gravel 15 PSZB 33-15 16 17 18 19 -60% fine to medium sand, ~40% gravel 20 PSZB 33-20 21 22 POORLY GRADED GRAVEL with SAND (GP): very pale brown (10YR 7/3), moist, ~80% gravel, ~20% fine to medium sand 23 24 25-PSZB 33-25 26 27 28 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 light gray (2.5Y 7/1), ~75% gravel, ~25% fine to medium sand PSZB Surface patched with 33-30 asphalt Bottom of boring at 30.5 ft bgs RMRK

Project No. 7190.004.0

Page 2 of 2

	IRWINDALE STUDY AREA nd Irwindale, California		Log of	Boring	g No. PS	SZB-34
BORING LOCATION:		· · · · · · · · · · · · · · · · · · ·	LEVATION AND			
			667.91 ft msl		B) DATE FINIS	SHED:
DRILLING CONTRACT	OR: Layne Christenson, Co.	. 3	3/28/05 3/2			
DRILLING METHOD:	Dual Wall Air Percussion		OTAL DEPTH (1 30.5	ft.):	MEASURIN Ground s	
DRILLING EQUIPMEN	T: Foremost Drills AP-1000		DEPTH TO	FIRST NA	COMPL.	24 HRS. NA
SAMPLING METHOD:	Cuttings from cyclone	L	OGGED BY:	11/1	INA	INA
			P. Jeffers RESPONSIBLE I	PROFESSION	ONAL:	REG. NO.
SAMPLES	NA DROP: NA		3. Rees	40		6612
DEPTH (feet) Sample No. Sample Blows/ 6 inches	NAME (USCS): color, moist, % by w cementation, react. w/H0	., plast. density, structure		PID READING (ppm)	RE	MARKS
S S E	Surface Elevation: 567.91 ft msl (NAVD 8	38)		R		red to 3 feet
1 - PSZB 34-1 2 - PSZB 34-2 5 - PSZB 34-5 6 - PSZB 8 - 34-7.5 8 - 34-7.5 9 - PSZB 34-10 11 -	(7.5YR 3/4), moist, ~75% fine to medium	SAND (GP): light gray 0% fine to medium san	- - - - -		casing and Lithology a	0.5' bgs with 9" hammer bit ssessed from llected through
13-						RMRK
	Geomatrix Consultants	-	Projec	ct No. 7190	.004.0	Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-34 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued light brown (7.5YR 6/3), ~65% gravel, ~35% fine to medium 15 PSZB 16 17 18 19 POORLY GRADED SAND with GRAVEL (SP): light brown (7.5YR 6/3), moist, ~70% fine to medium sand, ~30% gravel 20 PSZB 34-20 21 22 23 POORLY GRADED GRAVEL with SAND (GP): light brown 24 (7.5YR 6/3), moist, ~60% gravel, ~40% fine to medium sand 25 PSZB 26 27 28 29 POORLY GRADED SAND with GRAVEL (SP): brown Boring backfilled with (7.5YR 5/3), moist, ~70% medium to coarse sand, ~30% gravel bentonite chips hydrated in place after each 5' lift 30 PSZB Surface patched with asphalt Bottom of boring at 30.5 ft bgs 31 **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA/IRWINDALE ST Azusa and Irwindale, Ca		Log	of Boring	g No. PS	SZB-35
BORING LOCATION: PerkinElmer		ELEVATION A 567.34 ft ms		8)	
DRILLING CONTRACTOR: Layne Chri	stenson, Co.	DATE STARTI 3/28/05		DATE FINIS 3/28/05	HED:
DRILLING METHOD: Dual Wall Air Po	ercussion	TOTAL DEPTH	H (ft.):	MEASURING Ground su	1
DRILLING EQUIPMENT: Foremost Dri	ils AP-1000	DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA
SAMPLING METHOD: Cuttings from C	cyclone	LOGGED BY: P. Jeffers			
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBL G. Rees		ONAL:	REG. NO. 6612
SAMPLES LE GUERRO SAMPLES PLACE SAMPLES NAME (USC. NAME (USC. SAMPLES SAMPLE	DESCRIPTION S): color, moist, % by wt., plast. density, structicementation, react. w/HCl, geo. inter.	ıre,	PID READING (ppm)	REI	MARKS
Surface Elevation:	567.34 ft msl (NAVD 88)		RE (
1-PSZB 35-1 2-PSZB 3-35-2.5 4-PSZB 35-5 6-PSZB 8-35-7.5 POORLY GI (7.5YR 3/4), 11- 12- 12 10-PSZB 35-10 11- 12-	RADED GRAVEL with SAND (GP): dark be moist, ~60% gravel, ~40% medium to coate and the moist, ~60% gravel, ~40% medium to coate and the moist, ~75% medium to coarse sand, ~25% medium to coarse sand,	rse sand		Drilled to 30 casing and	ond surface (bgs) 0.5' bgs with 9" hammer bit seessed from lected through
13-					
14					
	natrix Consultants	Pm	ject No. 7190	.004.0	Page 1 of 2
Jeon Seol	, and a villamanta	1,10	,		. 490 . 0. 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-35 (cont'd) SAMPLES PID READING Sample Blows/ 6 inches **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued ~70% fine to medium sand, ~30% gravel 15-PSZB 35-15 16 17 18 POORLY GRADED GRAVEL with SAND (GP): light gray 19 (5YR 7/1), moist, ~85% gravel, ~15% fine to coarse sand 20 PSZB 35-20 21 22 POORLY GRADED SAND with GRAVEL (SP): light gray 23 (5YR 7/1), moist, ~60% fine to medium sand, ~40% gravel 24 25 PSZB 35-25 26 27 28 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 brown (7.5YR 5/3), ~75% medium to coarse sand, ~25% PSZB Surface patched with gravel 35-30 asphalt Bottom of boring at 30.5 ft bgs 31 **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA Azusa	AVIRWINDALE S and Irwindale, C			Log	of	Boring	g No. P	SZB-36
BORING LOCATION	: PerkinElmer			ELEVATION 569.80 ft m			B)	
DRILLING CONTRA	CTOR: Layne Ch	ristenson, Co.		DATE START 3/29/05			DATE FINI: 3/29/05	SHED:
DRILLING METHOD	· Dual Wall Air B	Paraussian		TOTAL DEPT	ГН (ft.):	MEASURIN	
				30.5 DEPTH TO	1	FIRST	Ground s	surface 24 HRS.
DRILLING EQUIPME	NT: Foremost Dr	rills AP-1000		WATER		NA	NA	NA
SAMPLING METHO	D: Cuttings from	cyclone		LOGGED BY P. Jeffers	:			
HAMMER WEIGHT:	NA	DROP: NA		RESPONSIB G. Rees	LEI	PROFESSION	ONAL:	REG. NO. 6612
(feet) (feet) (ample No. ample Slows/ sample	NAME (US	DESCRIPTION CS): color, moist, % by wt., plast. cementation, react. w/HCl, geo. i	density, structu			PID READING (ppm)	RE	EMARKS
(feet) Sample No. Sample Blows/	Surface Elevation	n: 569.80 ft msl (NAVD 88)			1	REA		
	~4" asphalt				十			ered to 2 feet
1- _{PSZB}		RADED SAND with GRAVEL , moist, ~70% medium sand, ~		own	-			ind surface (bgs) 0.5' bgs with 9"
36-1					-			hammer bit
2-	,				-		Lithology a	ssessed from
PSZB					-		cuttings co	Illected through
3-36-25					-			~
					-			
4-					-			
-		VEL with SAND (GM): light b		6/3),	1-	1		
5- _{PSZB}	nonplastic	% gravel, ∼15% fine to medium fines	sano~15%		-			
6-]		
7-							}	
					-			
PSZB 8- ^{36-7.5}					-			
					-	_		
9-	POORLY	GRADED GRAVEL with SAND	(GP): light a		┨.	<u> </u>		
		, moist, ~85% gravel, ~15% fir			-	4		
10- _{PSZB}					-	-		
36-10					-	-		
11-					-	-		
					.	-		
12-					.	-		
						-		
13-						-		
						1		
14-1-1-	/%≥ Geo				<u>-</u> -			RMRK3
	Geo	matrix Consultants		Pi	roje	ot No. 7190.	.004.0	Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-36 (cont'd) SAMPLES PID READING (ppm) DEPTH (feet) DESCRIPTION Blows/ 6 inches REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 PSZB 16 17 18 POORLY GRADED SAND with GRAVEL (SP): brown (7.5YR 5/3), moist, ~60% fine to medium sand, ~40% gravel 19 20 36-20 21 22 23 24 dark brown (7.5YR 3/4), ~75% medium to coarse sand, ~25% gravel 25 **PSZB** 26 27 28

POORLY GRADED GRAVEL with SAND (GP): light brown Boring backfilled with (7.5YR 6/3), moist, ~60% gravel, ~40% fine to medium sand bentonite chips hydrated in place after each 5' lift Surface patched with asphalt Bottom of boring at 30.5 ft bgs **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

29

30

31

PSZB

	PROJECT: AZUSA/IRWINDALE S Azusa and Irwindale, C		Log c	of Boring	g No. PSZB-37	
DRILLING CONTRACTOR: Layne Christenson, Co. DATE STATED: 3/29/05 3/29/0	BORING LOCATION: PerkinElmer				8)	
DRILLING METHOD: Dual Wall Air Percussion DRILLING EQUIPMENT: Foremost Drills AP-1000 DRITH TO FIRST GAMPL. 22 HRS. NA. NA. NA. NA. NA. NA. NA. NA. NA. NA	DRILLING CONTRACTOR: Layne Ch	ristenson. Co.	DATE STARTE		DATE FINISHED:	
DRILLING EQUIPMENT: Foremost Drills AP-1000 SAMPLING METHOD: Cuttings from cyclone HAMMER WEIGHT: NA DROP: NA DROP: NA RESPONSIBLE PROFESSIONAL: REG. N G. Rees SAMPLES REMARKS REMARKS ABOUT CATABANCH COMPLETANCE SAMPLES REMARKS DESCRIPTION NAME (USCS): color, moid, 15 yr M., past, density, structure, commercial complete the commercial commercial complete the commercial complete the commercial commercial complete the com				ł (ft.);		
DRILLING EXUMPLEN: Foremost Drills AP-1000 SAMPLING METHOD: Cuttings from cyclone HAMMER WEIGHT: NA DROP: NA DRSCRIPTION G. Rees SAMPLES NAME (USCS): color, moilst, *6 by wt., plast density, structure, comentation, react, wirthCl. goo, inter. SAMPLES Surface Elevation: 567.98 ft mai (NAVD 88) 1 - PSZB 1 - PSZB 3 - 37.2 S 1 - PSZB				1 FIRST		
HAMMER WEIGHT: NA DROP: NA RESPONSIBLE PROFESSIONAL: REG. N. G. Rees G	DRILLING EQUIPMENT: Foremost D	rills AP-1000	WATER			
FAMMER WEIGH: NA	SAMPLING METHOD: Cuttings from	cyclone	P. Jeffers			
NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, read, which (iso, inter.) Surface Elevation: 567-98 ft msl (NAVD 88) -4* asphalt POCRY GRADED GRAVEL with SAND (GP): dark brown (7.5YR 3/4), moist, ~60% gravel, ~40% medium to coarse sand PSZD 3-37-1		DROP: NA		E PROFESSI		
-4" asphalt POORLY GRADED GRAVEL with SAND (GP): dark brown (7.5YR 3/4), moist, -60% gravel, -40% medium to coarse sand -4" asphalt POORLY GRADED GRAVEL with SAND (GP): dark brown (7.5YR 3/4), moist, -60% gravel, -40% medium to coarse sand Drilled to 30.5' bgs with casing and hammer bit Lithology assessed fro cuttings collected through the cyclone light brown (7.5YR 6/3), -75% gravel, -25% fine to medium sand 10		CS): color, moist, % by wt., plast, density, structu	ıre,	PID ADING	REMARKS	
POORLY GRADED GRAVEL with SAND (GP): dark brown (7.5YR 3/4), moist, ~60% gravel, ~40% medium to coarse sand PSZB 3/-1 PSZB 3/-1 Iight brown (7.5YR 6/3), ~75% gravel, ~25% fine to medium sand Iight gray (10YR 7/1), ~85% gravel, ~15% fine to medium sand Iight gray (10YR 7/1), ~85% gravel, ~15% fine to medium sand Iight gray (10YR 7/1), ~85% gravel, ~15% fine to medium sand	Surface Elevation	n: 567.98 ft msl (NAVD 88)		RE)		
10 - PSZB - 37.7 5 9 - 10 - PSZB - 37.7 5 9 -	1- _{PSZB} POORLY 6 (7.5YR 3/4)	RADED GRAVEL with SAND (GP): dark b			below ground surface (Drilled to 30.5' bgs with	(bgs) h 9"
Solution Sight brown (7.5YR 6/3), ~75% gravel, ~25% fine to medium Sand	3- ^{37-2 5}			† †	cuttings collected throu	
8-37-75 9-10-pszb-37-10 11-12-13-14	5-PSZB 37-5	n (7.5YR 6/3), ~75% gravel, ~25% fine to m	edium			
11- 12- 13- 14	9- 10- _{PSZB} light gray sand	(10YR 7/1), ~85% gravel, ~15% fine to med	Iium	-		,
	11-					
	14					DMCMA
Geomatrix Consultants Project No. 7190.004.0 Page 1 of 2		omatrix Consultants	Pro	ject No. 7190		RMRK3

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-37 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued light brown (7.5YR 6/3), ~70% gravel, ~30% fine to medium 15⊣_{PSZB} 37-15 16 17 18 19 POORLY GRADED SAND with GRAVEL (SP): brown (7.5YR 5/3), moist, ~85% medium to coarse sand, ~15% gravel PSZB 37-20 21 22 23 POORLY GRADED GRAVEL with SAND (GP): light gray (10YR 7/1), moist, ~70% gravel, ~30% fine to medium sand 24 25 PSZB 37-25 26 27 POORLY GRADED SAND with GRAVEL (SP): light brown 28 (7.5YR 6/3), moist, ~80% fine to medium sand, ~20% gravel 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 PSZB Surface patched with asphalt Bottom of boring at 30.5 ft bgs **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA Azusa a	/IRWINDALE ST			Log	of Bori	ng No. P	SZB-38
BORING LOCATION:				ELEVATION A			
				565.86 ft m		DATE FIN	SHED:
DRILLING CONTRACT	TOR: Layne Chris	stenson, Co.		3/29/05		3/29/05	
DRILLING METHOD:	Dual Wall Air Pe	ercussion		TOTAL DEPT	H (ft.):	Ground	NG POINT: surface
DRILLING EQUIPMEN	IT: Foremost Dril	Is AP-1000		DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA
SAMPLING METHOD:	Cuttings from c	vclone		LOGGED BY:		1	
				P. Jeffers RESPONSIBL	E PROFES	SIONAL:	REG. NO.
HAMMER WEIGHT:	NA ·	DROP: NA		G. Rees			6612
DEPTH (feet) Sample Sample Sample Blows/ Blo	NAME (USCS	DESCRIPTION 5): color, moist, % by wt., plas cementation, react. w/HCl, ged	t. density, structu . inter.	re,	PID READING	(ELGG	EMARKS
Sar Sar 6 in 6	Surface Elevation:	565.86 ft msl (NAVD 88)			88	<u> </u>	
1 - PSZB 38-1 2 - PSZB 38-2.5 3 - SB-2.5 38-5 6 - PSZB 8 - SB-7.5	(7.5YR 3/4), I	ADED GRAVEL with SANi moist, ~60% gravel, ~40% 0YR 7/1), ~85% gravel, ~1	medium to coar	se sand		Drilled to casing an	ered to 2 feet und surface (bgs) 30.5' bgs with 9" d hammer bit assessed from ollected through re
13-				· .	-		
14							RMRK3
1	//X Geon	natrix Consultants	······································		oject No. 71		Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-38 (cont'd) SAMPLES PID READING Blows/ 6 inches DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, react, w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued light brown (7.5YR 6/3), ~85% gravel, ~15% fine to medium 15 PSZB 38-15 16 17 18 19 POORLY GRADED SAND with GRAVEL (SP): brown (7.5YR 5/3), moist, ~75% fine to medium sand, ~25% gravel 20 38-20 21 22-23 24 light gray (10YR 7/1), 25 38-25 26 27 28 29 POORLY GRADED GRAVEL with SAND (GP): light gray Boring backfilled with (10YR 7/1), moist, ~65% gravel, ~35% fine to medium sand bentonite chips hydrated in place after each 5' lift 30 PSZB Surface patched with asphalt Bottom of boring at 30.5 ft bgs 31 **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

BORING LOCATION: PerkinElmer DRILLING CONTRACTOR: Layne Christenson, Co. DRILLING METHOD: Dual Wall Air Percussion DRILLING EQUIPMENT: Foremost Drills AP-1000 DRILLING EQUIPMENT: Foremost Drills AP-1000 DRILLING METHOD: Cuttings from cyclone HAMMER WEIGHT: NA DROP: NA DESCRIPTION SAMPLES DESCRIPTION NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, react, wHCl, geo, inter. Surface Elevation: 564.60 ft msl (NAVD 88) DRILLING EQUIPMENT: Foremost Drills AP-1000 DEPTH TO FIRST COMPL. NA NA NA LOGGED BY: L. Budny RESPONSIBLE PROFESSIONAL: G. Rees PSAMPLES NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, react, wHCl, geo, inter. Surface Elevation: 564.60 ft msl (NAVD 88) Drilled to 30 casing and Lithology accuttings color.	Boring No. PSZB-39			ALE STUDY AREA dale, California	USA/IRWINDALE usa and Irwindale		OJECT:	PRO
DRILLING CONTRACTOR: Layne Christenson, Co. DATE STARTED: 3/22/05 3/2		ELEVATION AND DATUM: 564 60 ft msl (NAVD 8		lmer	ION: PerkinElmer	CATION:	RING LO	BOR
DRILLING METHOD: Dual Wall Air Percussion DRILLING EQUIPMENT: Foremost Drills AP-1000 DRILLING EQUIPMENT: Foremost Drills AP-1000 SAMPLING METHOD: Cuttings from cyclone HAMMER WEIGHT: DESCRIPTION DESCRIPTION RESPONSIBLE PROFESSIONAL: G. Rees DESCRIPTION NAME (USCS): color, moist, % by wt. plast, density, structure, cementation, react, withcl, geo, inter. DORILLING METHOD: Cuttings from cyclone HAMMER WEIGHT: NA DROP: NA RESPONSIBLE PROFESSIONAL: G. Rees DESCRIPTION Surface Elevation: 564.60 ft msl (NAVD 88) 4* asphalt POORLY GRADED SAND (SP): yellowish brown (10YR 5/4), moist, 100% medium to coarse sand Drilled to 3: casing and Lithology a cuttings coil the cyclone Trace gravel POORLY GRADED SAND with GRAVEL (SP): yellowish brown (10YR 5/4), moist, -85% medium to coarse sand, -15% gravel	DATE FINISHED:	DATE STARTED:		ne Christenson, Co.	TRACTOR: Layne (CONTRAC	LLING	DRIL
DRILLING EQUIPMENT: Foremost Drills AP-1000 SAMPLING METHOD: Cuttings from cyclone HAMMER WEIGHT: NA DROP: NA DESCRIPTION G. Rees SAMPLES NA DESCRIPTION NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, react, wh/Cl, geo, inter. Surface Elevation: 564,601 msl (NAVD 88) POORLY GRADED SAND (SP): yellowish brown (10YR 5/4), moist, 100% medium to coarse sand POORLY GRADED SAND with GRAVEL (SP): yellowish brown (10YR 5/4), moist, -85% medium to coarse sand, ~15% gravel POORLY GRADED SAND with GRAVEL (SP): yellowish brown (10YR 5/4), moist, -85% medium to coarse sand, ~15% gravel	: MEASURING POINT:	TOTAL DEPTH (ft.):		all Air Percussion	HOD: Dual Wall A	METHOD:	LLING	DRII
SAMPLING METHOD: Cuttings from cyclone HAMMER WEIGHT: NA DROP: NA DESCRIPTION G. Rees SAMPLES NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, react, wirtcl, geo, inter. Surface Elevation: 564.60 ft msl (NAVD 88) -4* asphalt POORLY GRADED SAND (SP): yellowish brown (10YR 5/4), moist, 100% medium to coarse sand Lithology arcuttings color the cyclones trace gravel POORLY GRADED SAND with GRAVEL (SP): yellowish brown (10YR 5/4), moist, -85% medium to coarse sand, -15% gravel	Ground surface RST COMPL. 24 HRS.						- 	-
HAMMER WEIGHT: NA DROP: NA RESPONSIBLE PROFESSIONAL: Continue	A NA NA							<u> </u>
HAMMER WEIGHT: NA DROF: NA G. Rees Comparison of the comparison		L. Budny		s from cyclone	HOD: Cuttings fro	METHOD	MPLING	SAM
SAMPLES SAMPLES NAME (USCS): color, moist, 'b y wt., plast, density, structure, cementation, react, wifted, geo, inter. Samples	OFESSIONAL: REG. NO. 6612			DROP: NA	HT: NA	VEIGHT:	MMER V	HAN
-4" asphalt POORLY GRADED SAND (SP): yellowish brown (10YR 5/4), moist, 100% medium to coarse sand Drilled to 3' casing and Lithology are cuttings column to coarse sand. PSZB 39-2 5 PSZB 39-2 5 PSZB 39-8 6 POORLY GRADED SAND with GRAVEL (SP): yellowish brown (10YR 5/4), moist, ~85% medium to coarse sand, ~15% gravel POORLY GRADED SAND with GRAVEL (SP): yellowish brown (10YR 5/4), moist, ~85% medium to coarse sand, ~15% gravel	ON REMARKS		, plast, density, structur	ME (USCS): color, moist, % by wt				EPTH (197
POORLY GRADED SAND (SP): yellowish brown (10YR 5/4), moist, 100% medium to coarse sand POORLY GRADED SAND (SP): yellowish brown (10YR 5/4), moist, 100% medium to coarse sand Lithology at cuttings cold the cyclone brown (10YR 5/4), moist, ~85% medium to coarse sand, ~15% gravel POORLY GRADED SAND with GRAVEL (SP): yellowish brown (10YR 5/4), moist, ~85% medium to coarse sand, ~15% gravel	RE	RE	3)	Elevation: 564.60 ft msl (NAVD 8	Surface Eleva	Sar Blo Bin	San	a ·
39-5 gravel 6- 7- PSZB 8- 39-7.5 9- - 100 100 100 100 100 100 1	below ground surface (bgs) Drilled to 30.5' bgs with 9" casing and hammer bit Lithology assessed from cuttings collected through the cyclone	- - - - -	AVEL (SP): yellowi	DRLY GRADED SAND (SP): yest, 100% medium to coarse sar e gravel DRLY GRADED SAND with GR	POORLY moist, 10	3	39-1 2	-
11- 12- 13- 14 Geomatrix Consultants Project No. 7190.004.0	RMRK3			/el	gravel	B	9- 10- PSZ 39-7 9- 11- 12-	1 1 1

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-39 (cont'd) **SAMPLES** PID READING Sample Blows/ 6 inches **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued 15-PSZB 39-15 16 17 18-19 SILTY SAND with GRAVEL (SM): light brownish gray (10YR 6/2), moist, ~65% fine to coarse sand, ~20% gravel, ~15% nonplastic fines 20 PSZB 39-20 21 22 23 24 25 PSZB 39-25 26 27 28-

Geomatrix Consultants

Bottom of boring at 30.5 ft bgs

29

30

PSZB

39-30

Project No. 7190.004.0

Page 2 of 2

RMRK3

Boring backfilled with bentonite chips hydrated in place after each 5' lift

Surface patched with

asphalt

	VIRWINDALE STUD			Log	of Borin	g No. P	SZB-40
BORING LOCATION:	PerkinElmer		•		ND DATUM: sl (NAVD 8	8)	
DRILLING CONTRAC	TOR: Layne Christer	neon Co	D/	ATE STARTI		DATE FINE	SHED:
				22/05 DTAL DEPTI	4 (ft \)·	3/22/05 MEASURIN	IG POINT
DRILLING METHOD:	Dual Wall Air Percu	ussion 	30	0.5		Ground s	urface
DRILLING EQUIPME	NT: Foremost Drills A	AP-1000	w	EPTH TO ATER	FIRST NA	COMPL.	24 HRS. NA
SAMPLING METHOD	: Cuttings from cycl	one		OGGED BY: Budny			
HAMMER WEIGHT:	NA D	ROP: NA	R		E PROFESSI	ONAL:	REG. NO. 6612
Sample Sa	NAME (USCS):	DESCRIPTION color, moist, % by wt., plast. de entation, react. w/HCl, geo. into	ensity, structure,		PID READING (ppm)	RE	EMARKS
San San San Bio Bio 6 in 6	Surface Elevation: 56	64.24 ft msl (NAVD 88)			RE,		
1 - _{PSZB}		ED SAND (SP): yellowish lidium to coarse sand	brown (10YR	5/4),		below grou	ered to 1.5 feet and surface (bgs) 0.5' bgs with 9" I hammer bit
2- PSZB 3-40-2.5						Lithology a	assessed from ellected through
4- - 5- _{PSZB} 40-5		ED GRAVEL with SAND (0 st, ~85% gravel, ~15% coar			-		
6- - 7-		DED SAND with GRAVEL (S		-			
9-	brown (10YR 5/ gravel	'4), moist, ∼85% medium to	coarse sand,	~15%			
10- _{PSZB}							
11-							
12-							
14	<u> </u>					<u> </u>	RMRK
	/// Geomati	rix Consultants	·····	Pro	ject No. 7190	.004.0	Page 1 of 2

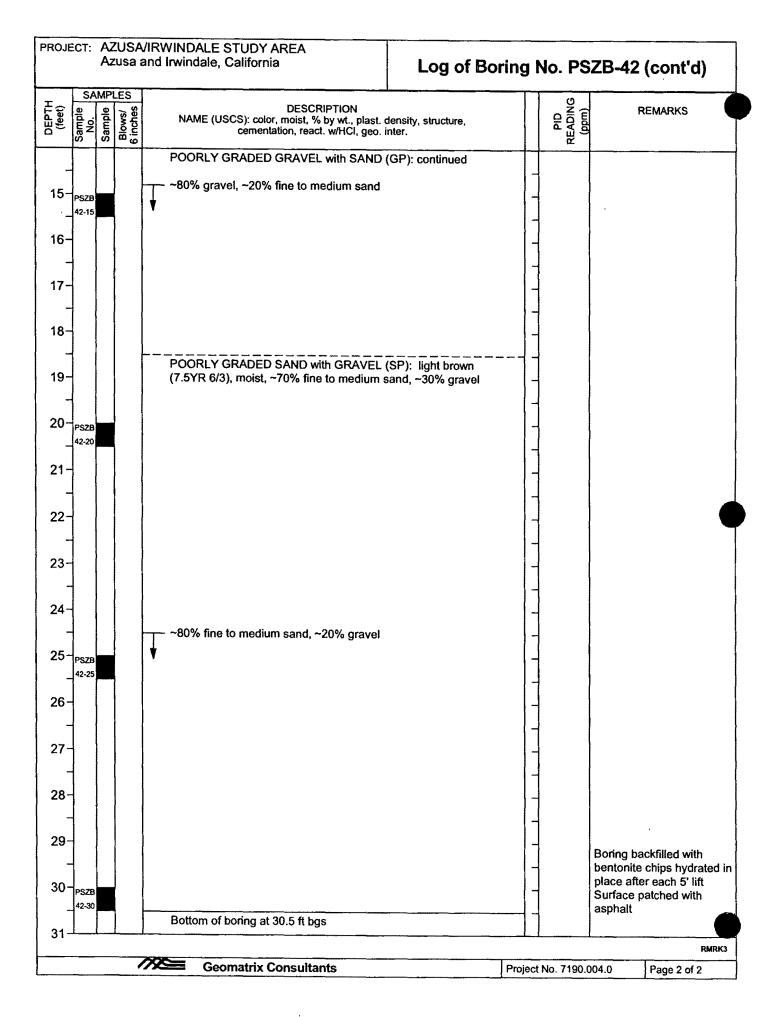
PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-40 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued 15 PSZB 40-15 16 17 18 19 PSZB SILTY SAND with GRAVEL (SM): light brownish gray 40-20 (10YR 6/2), moist, ~65% fine to coarse sand, ~20% gravel, ~15% nonplastic fines 21 22 23 24 25 No recovery at 25' bgs 26 27 28

29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 Surface patched with asphalt Bottom of boring at 30.5 ft bgs 31 **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA Azusa	VIRWINDALE ST and Irwindale, C			Log	of Borin	g No. P	SZB-41
BORING LOCATION:	PerkinElmer			ELEVATION A			
DRILLING CONTRAC	CTOR: Lavro Cha	istenson Co		562.31 ft m		DATE FINIS	SHED:
	•			4/1/05 TOTAL DEPTI	⊔ /# \·	4/1/05 MEASURIN	IG POINT:
DRILLING METHOD:	Dual Wall Air P	ercussion		30.5		Ground s	urface
DRILLING EQUIPME	NT: Foremost Dr	lls AP-1000		DEPTH TO WATER	FIRST NA	COMPL.	24 HRS. NA
SAMPLING METHOD	D: Cuttings from	cyclone		LOGGED BY: P. Jeffers			
HAMMER WEIGHT:	NA	DROP: NA		RESPONSIBL G. Rees	E PROFESS	IONAL:	REG. NO. 6612
Sample Sample Sample Sample Blows/ Sample Sample Blows/ Sample Sa	NAME (USC	DESCRIPTION S): color, moist, % by wt., plast. cementation, react. w/HCl, geo.	density, structul	re,	PID READING	RE	MARKS
San San San San San San San San San San	Surface Elevation	: 562.31 ft msl (NAVD 88)			RE,	1	
1 - _{PSZB} - 41-1		RADED GRAVEL with SAND moist, ~70% gravel, ~30% m			-	below grou	red to 3 feet nd surface (bgs) 0.5' bgs with 9" I hammer bit
2- - _{PSZB} 3- ^{41-2.5} - 4-					- - - -		ssessed from llected through
5- _{PSZB} 41-5	light gray (5Y 7/1), ~85% gravel, ~15% t	fine to medium	sand	-		
9- - 10- _{PSZB}	~70% grave	el, ~30% fine to medium sand	l		T T T T T T T T T T T T T T T T T T T		
11-							
14-1							RMRK3
	///Second	matrix Consultants		Pro	oject No. 719	0.004.0	Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-41 (cont'd) PID | READING | (ppm) SAMPLES DESCRIPTION Sample REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued ~85% gravel, ~15% fine to medium sand 15 PSZB 41-15 16 17 18 19 POORLY GRADED SAND with GRAVEL (SP): light brown (7.5YR 6/3), moist, ~70% fine to medium sand, ~30% gravel 20-PSZB 41-20 21 22 23 24 ~80% fine to medium sand, ~20% gravel 25 PSZB 41-25 26 27 POORLY GRADED GRAVEL with SAND (GP): light brown (7.5YR 6/4), moist, ~70% gravel, ~30% fine to medium sand 28 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 PSZB Surface patched with 41-30 asphalt Bottom of boring at 30.5 ft bgs RMRK3 /// **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA/IRWINDALE S' Azusa and Irwindale, C		Log	of Boring	g No. PS	6ZB-42
BORING LOCATION: PerkinElmer		ELEVATION A 563.48 ft ms		8)	
DRILLING CONTRACTOR: Layne Chr	istenson, Co.	3/31/05		3/31/05	
DRILLING METHOD: Dual Wall Air P	ercussion	TOTAL DEPTH	, -	MEASURIN Ground s	urface
DRILLING EQUIPMENT: Foremost Dr	ills AP-1000	DEPTH TO WATER	FIRST NA	COMPL.	24 HRS. NA
SAMPLING METHOD: Cuttings from	cyclone	LOGGED BY: P. Jeffers			
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLI G. Rees		ONAL:	REG. NO. 6612
SAMPLES OF BIOMS/SAMPLES NAME (USO) Sumble Some Some Some Some Some Some Some Som	DESCRIPTION CS): color, moist, % by wt., plast. density, struct cementation, react. w/HCl, geo. inter.	ure,	PID READING (ppm)	RE	MARKS
Surface Elevation ~4" asphalt	: 563.48 ft msl (NAVD 88)		RE		red to 2 feet
1 - PSZB 42-1	RADED GRAVEL with SAND (GP): dark to moist, ~65% gravel, ~35% medium to coast to coast to coast to coast to coast to coast to coast to coast to coast to coast to coa	rse sand		Drilled to 3 casing and	nd surface (bgs) 0.5' bgs with 9" hammer bit ssessed from llected through
13-					
14 Geo	matrix Consultants	I Pro	ject No. 7190.	004.0	RMRK3 Page 1 of 2
Geo	maurix Consultants	1 1 10	JECT NO. 7 190.	.004.0	I AYE I ULL



	IRWINDALE STUDY A		Log	of Borin	g No. PS	SZB-43
BORING LOCATION:				AND DATUM:		
BORING LOCATION:				nsl (NAVD 8		
DRILLING CONTRACT	OR: Layne Christensor	n, Co.	3/30/05	IED:	3/30/05	אחבט:
DON LINO METUCE	Dual Mail Air D	- m	TOTAL DEP	TH (ft.):	MEASURIN	G POINT:
DRILLING METHOD:	Dual Wall Air Percussion	on	30.5		Ground s	
DRILLING EQUIPMEN	T: Foremost Drills AP-1	000	DEPTH TO WATER	FIRST	COMPL. NA	24 HRS. NA
SAMPLING METHOD:	Cuttings from cyclone		LOGGED B'			
HAMMER WEIGHT:	NA DROP	: NA		BLE PROFESSI	ONAL:	REG. NO. 6612
SAMPLES		DESCRIPTION		T 0		
DEPTH (feet) Sample No. Sample Blows/ 6 inches	NAME (USCS): color cementa	, moist, % by wt., plast. den- tion, react. w/HCl, geo. inter	sity, structure,	PID READING (ppm)	RE	MARKS
]	Surface Elevation: 565.22	ft msl (NAVD 88)		 		
	~4" asphalt			41		red to 2 feet
	POORLY GRADED	GRAVEL with SAND (GF 60% gravel, ~40% media): dark brown	17	pelow grou	nd surface (bgs)
1- _{PSZB}	(7.51 K 3/4), IIIOISI, ~	oo /a graver, ~40% medit	un to coarse sand	14	Drilled to 3	0.5' bgs with 9"
_ 43-1				1-		hammer bit
2-				-	Lithology a	ssessed from
PSZB				14	cuttings co	llected through
3-43-2.5				14	the cyclone	•
4-						
				14		
5- _{PSZB}	light gray (5Y 7/1),	~70% gravel, ~30% fine	to medium sand	1-		
43-5	₩			14		
6-						
				17		
7-				1-1		
PSZB				14		
843-7.5						
				17		
9-				11		
				1-		
10- _{PSZB}						
43-10						
				17		
11-						
				-		
12-] -		
13-						
				-		
14						RMRK3
	Geomatrix (Consultants	T F	Project No. 7190	0.004.0	Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-43 (cont'd) SAMPLES PID READING **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. ~85% gravel, ~15% fine to medium sand 15-PSZB 43-15 16 17 18 19--70% gravel, ~30% fine to medium sand 20 PSZB 43-20 21 22 23 POORLY GRADED SAND with GRAVEL (SP): light brown 24 (7.5YR 6/4), moist, ~70% fine to medium sand, ~30% gravel 25 PSZB 43-25 26 27 28 29 POORLY GRADED GRAVEL with SAND (GP): light brown Boring backfilled with (7.5YR 6/4), moist, ~60% gravel, ~40% fine to medium sand bentonite chips hydrated in place after each 5' lift 30 PSZB Surface patched with asphalt Bottom of boring at 30.5 ft bgs RMRK3 **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA Azusa	VIRWINDALE ST and Irwindale, Ca			Log	of Boring	g No. P	SZB-44
BORING LOCATION:				ELEVATION A			
BORING LOCATION.	Perkindiner				sl (NAVD 8		
DRILLING CONTRAC	TOR: Layne Chris	stenson, Co.		DATE START 3/30/05	ED:	3/30/05	SHED:
	D 114/-0 41- D			TOTAL DEPT	H (ft.):	MEASURIN	IG POINT:
DRILLING METHOD:	Duai waii Air Pe	ercussion		30.5		Ground s	
DRILLING EQUIPME	NT: Foremost Dril	Is AP-1000		DEPTH TO WATER	FIRST NA	COMPL. NA	24 HRS. NA
SAMPLING METHOD	: Cuttings from c	yclone		LOGGED BY: P. Jeffers			
HAMMER WEIGHT:	NA	DROP: NA			E PROFESSI	ONAL:	REG. NO. 6612
SAMPLES	NAME (USC	DESCRIPTION S): color, moist, % by wt., plast. d	ensity, structur	e,	PID READING (ppm)	RE	MARKS
CEPTH (feet) Sample No. Sample Blows/ 6 inches	'	cementation, react. w/HCl, geo. ir	iter.		EAG P		
S S B S	Surface Elevation: ~4" asphalt	565.93 ft msl (NAVD 88)			 	11	red to 3 feet
1 — PSZB 44-1 2 — PSZB 3 — 44-2.5 4 — — 5 — PSZB 44-5 6 — — 7 —	POORLY GF	moist, ~70% gravel, ~30% me	SP): dark bro			casing and	0.5' bgs with 9" I hammer bit Issessed from Illected through
9- 10- _{PSZB} 44-10 11- 12- 13-		RADED GRAVEL with SAND of moist, ~70% gravel, ~30% fin					
14-	~~~						RMRK3
	Geor	natrix Consultants		Pr	oject No. 7190	.004.0	Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-44 (cont'd) PID | READING | (ppm) SAMPLES DESCRIPTION Sample Blows/ 6 inches REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued light gray (5Y 7/1), ~80% gravel, ~20% fine to medium sand 15 PSZB 44-15 16 17 18 19 light brown (7.5YR 6/4), ~60% gravel, ~40% fine to medium sand 20 Very difficult drilling from PSZB 20'-30' bgs 21 22 23 24 light gray (5Y 7/1), 25 PSZP 44-25 26 27 28 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 ~85% gravel, ~15% fine to medium sand PSZE Surface patched with asphalt Bottom of boring at 30.5 ft bgs RMRK3 **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

	IRWINDALE STUDY AREA nd Irwindale, California	Log	of Borin	g No. PS	SZB-45
BORING LOCATION:	PerkinElmer .		AND DATUM:	0)	
DRILLING CONTRACT	OR: Layne Christenson, Co.	DATE STAR 2/8/06	msl (NAVD 8 RTED:	DATE FINIS 2/8/06	SHED:
DRILLING METHOD:	Dual Wall Air Percussion	TOTAL DEP	TH (ft.):	MEASURIN	
DRILLING EQUIPMEN	T: Foremost Drills AP-1000	40.5 DEPTH TO	FIRST	Ground s	24 HRS.
		WATER LOGGED B	¦NA Y:	j NA	NA
	Cuttings from cyclone	K. Zeiler	BLE PROFESSI	ONAL	REG. NO.
HAMMER WEIGHT:		G. Rees		TOTAL.	6612
Cleet) Sample No. Sample Blows/ G inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. cementation, react. w/HCl, geo. i	density, structure, nter.	PID READING (ppm)	RE	MARKS
Sar Sar 6 in 6	Surface Elevation: 566.11 ft msl (NAVD 88)		J R.		
1 - PSZB-45-1 2 - PSZB-45-1 3 - 2.5 4	POORLY GRADED SAND with GRAVEL (2.5Y 5/2), moist,~75% fine to coarse san fines			ground surf BC² Enviro 3"-4" cobbl cuttings 1' and 2.5' collected fr boning Drilled to 4 casing and	es in air knife samples om sidewalls of 0.5' bgs with 9" hammer bit ssessed from llected through
12-	POORLY GRADED GRAVEL with SAND brown (2.5Y 4/2), moist, ~85% gravel, ~1 sand, trace fines		-		
	brown (2.5Y 4/2), moist, ~85% gravel, ~1				RMRK

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-45 (cont'd) SAMPLES PID READING DESCRIPTION **REMARKS** NAME (USCS): color, moist, % by wt., plast density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15-45-15 16 17 ~65% gravel, ~35% fine to coarse sand, trace fines 18 19 45-20 21 22-~75% gravel, ~25% fine to coarse sand, trace fines 23 24 25 45-25 26 27 POORLY GRADED SAND with GRAVEL (SP): grayish brown 28 (2.5Y 5/2), moist,~70% fine to medium sand, ~30% gravel, trace fines 29 30 45-RMRK3 **Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 3

Azusa and Irwindale, California Log of Boring No. PSZB-4							ZB-45 (cont'd)	
(feet)	Sample S No.	Sample 4	Blows/ m 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plas cementation, react. w/HCl, ge	st. density, structure, o. inter.		PID READING (ppm)	REMARKS
	0)	0)	9	POORLY GRADED SAND with GRAVE	(SD): continued		<u>~</u>	
,				. SONET STADED SAND WILL STAVE	.c (SF). continued	14		
32~						14		
1			}	── ~80% fine to coarse sand, ~20% gravel	. trace fines			
33~				↓	,			
-								
34~								
· .								
35~	PSZB-					7		
JJ -	45-							
20	35							
36~						· [4		
1								
37-		l						
~								
38-						-		
-				•		14		
39-						-		
4			ı					
40~								
-	45- 40							Boring backfilled with bentonite chips and
41-				Bottom of boring at 40.5 ft bgs				continuously hydrated
_					•			Surface patched with asphalt
42-]]		
· - _								
43~						ÌŢ		
+3								
44~					•			
7						-		
45-						-		
7						-		
46-						[-]		
_						.]]		
47-								
-								
48-]		
-								RN

PROJEC				IRWINDALE ST nd Irwindale, Ca						g No. P	SZB-46
BORING	LOC	CATIC	N:	PerkinElmer			ELEVATION 567.08 ft r			8)	
DRILLING	G C	ONTR	ACT	OR: Layne Chris	stenson, Co.		DATE STAR 3/31/05			DATE FINI 3/31/05	SHED:
DRILLING METHOD: Dural Wall Air Paraussian							TOTAL DEP 30.5	TH (f	t.):		NG POINT: surface
DRILLING	G E	QUIPI	MEN	T: Foremost Drill	ls AP-1000		DEPTH TO WATER		FIRST NA	COMPL.	24 HRS. NA
SAMPLIN	NG N	ЛЕТН	OD:	Cuttings from c	yclone		LOGGED BY	<i>(</i> :			•
HAMMEF				NA .	DROP: NA		RESPONSIE G. Rees	BLE F	ROFESSI	ONAL:	REG. NO. 6612
		Sample Sample Blows/	6 inches	NAME (USCS	DESCRIPTION S): color, moist, % by wt., placementation, react, w/HCl, get	ast. density, structur eo. inter.	re,		PID READING (ppm)	RI	EMARKS
Sal C	3	Sai	9	Surface Elevation:	567.08 ft msl (NAVD 88)				RE (
4			-		ADED GRAVEL with SAN			$\dashv \downarrow$			ered to 2 feet und surface (bg:
1	SZB 16-1			(7.5YR 3/4), r	noist, ~75% gravel, ~25%	medium to coar	se sand				30.5' bgs with 9"
2-	V										d hammer bit
	SZB			,				_		cuttings co	assessed from ollected through
3-46	6-2.5			1						the cyclon	e
4-											•
4					~40% fine to medium sa	nd		-			
•	SZB 46-5			y graver,	40 /V IIIO LO HIOGIGHI SCI	iid		-	*		
6-								-			
4								-			
7-								-			
8-	SZB 6-7.5							-			
+								-			
9-					ADED GRAVEL (GP): li		, moist,	-			
10-	SZB			3				-			
1	16-10							-			
11-								-	- Annual Control of the Control of t		
12-								-			
13-								_			
137				POORLY GF (7.5YR 6/3),	RADED GRAVEL with SA moist, ~60% gravel, ~40%	ND (GP): light br % fine to medium	own sand]-			
14											RMR
			-	Geom	atrix Consultants	***************************************	Р	rojec	t No. 7190.	004.0	Page 1 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-46 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION REMARKS Blows/ 6 inches Sample NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 PSZB 46-15 16 17-18 19 POORLY GRADED SAND with GRAVEL (SP): light brown (7.5YR 6/3), moist, ~70% fine to medium sand, ~30% gravel 20 PSZB 46-20 21 22 23 24 POORLY GRADED GRAVEL with SAND (GP): light gray 25 (5Y 7/1), moist, ~85% gravel, ~15% fine to medium sand PSZB 46-25 26 27 28 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30-PSZB Surface patched with asphalt Bottom of boring at 30.5 ft bgs 31 RMRK3

Project No. 7190.004.0

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Geomatrix Consultants

PROJECT: AZUSA Azusa :	/IRWINDALE ST		L	og of	Boring	g No. P	SZB-47	
BORING LOCATION:	PerkinElmer		1		DATUM: (NAVD 8	B)		
DRILLING CONTRAC	TOR: Layne Chris	stenson, Co.		STARTED				
DRILLING METHOD:	Dual Wall Air Pe	DEPTH (ft.):	MEASURIN Ground s				
DRILLING EQUIPMEN	NT: Foremost Drill	s AP-1000	30.5 DEPTH WATER	,	FIRST NA	COMPL.	24 HRS. NA	
SAMPLING METHOD	: Cuttings from c	yclone	LOGGE P. Jef	D BY:		1101	11.77	
HAMMER WEIGHT:	NA	DROP: NA		NSIBLE I	PROFESSIO	ONAL:	REG. NO. 6612	
DEPTH (feet) Sample No. No. Sample Blows/ Sinches Sinches	NAME (USCS	DESCRIPTION i): color, moist, % by wt., plast. cementation, react. w/HCl, geo. ir	lensity, structure,		PID READING (ppm)	RE	EMARKS	
1 - PSZB - 47-1 - 12 - 13 - 13 - 13 - 13 - 13 - 13 -	→ 4" asphalt POORLY GR (7.5YR 3/4), r POORLY GR (7.5YR 6/3), f	ADED GRAVEL with SAND (noist, ~60% gravel, ~40% metals). ADED SAND with GRAVEL (moist, ~85% fine to medium stands).	0% fine to coarse (SP): light brown sand, ~15% gravel		cc .	Drilled to 3 casing and	ered to 2 feet and surface (bgs) 60.5' bgs with 9" d hammer bit assessed from ollected through e	
14-1							RMRK3	
	// Geom	atrix Consultants		Projec	t No. 7190.	004.0	Page 1 of 2	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-47 (cont'd) SAMPLES PID READING DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): light gray (5Y 7/1), moist, ~80% gravel, ~20% fine to medium sand 15 PSZB. 16 17 18 19 20 ~70% gravel, ~30% fine to medium sand PSZB 47-20 21 22 POORLY GRADED SAND with GRAVEL (SP): light brown 23 (7.5YR 6/3), moist, ~65% fine to medium sand, ~35% gravel 24 25 PSZB 47-25 26 27

28 POORLY GRADED GRAVEL with SAND (GP): light brown (7.5YR 6/3), moist, ~75% gravel, ~25% fine to medium sand 29 Boring backfilled with bentonite chips hydrated in place after each 5' lift 30 PSZB Surface patched with asphalt Bottom of boning at 30.5 ft bgs 31 **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 2

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California						Log of Boring No. PSZB-48						
BORING LO	CATI	ION.	PerkinElmer AO	C	1	LEVATION 66.59 ft r			 3)			
DRILLING CONTRACTOR: Layne Christenson, Co. DATE STARTED 3/2/06 3/2/06						SHED:						
DRILLING METHOD: Dual Wall Air Percussion					T	TOTAL DEPTH (ft.). MEASURING POINT 40.5 Ground surface						
DRILLING	EQUIF	PMEN	T Foremost Drill	s AP-1000	D	EPTH TO /ATER		IRST VA	COMPL.	24 HRS.		
SAMPLING	MET	HOD:	Cuttings from cy	yclone	L	OGGED BY	<u>/:</u>		1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
HAMMER WEIGHT. NA DROP NA RESPONSI G. Rees					ESPONSIE		ROFESSIO	ONAL:	REG. NO. 6612			
_	AMPLI			DESCRIPTION b): color, moist, % by wt , plast. delementation, react. w/HCl, geo inte	nsity, structure,			PID READING (ppm)	RE	MARKS		
(feet) Sample	Sample	Blows/ 6 inches		566.59 ft msl (NAVD 88)	!!		$\dashv \mid$	REA (P				
	++	┪	~3" asphalt	300.33 It mai (147.42 00)			╁╁					
1 - PSZE 48-	3		POORLY GR	ADED GRAVEL with SAND (Ginoist, ~75% gravel, ~25% fine t		d						
2-		-	gray (7.5YR 6	i/1), ~85% gravel, ~15% fine to	coarse sand							
PSZE									Drilled to 4	0.5' bgs with 9		
3- 25										I hammer bit		
4-										assessed from ollected through e		
5 PSZE 48- 5	3											
6-							-			•		
_			ight gray (7.5	YR 7/1)			-					
7- PSZ6									:			
8 - 75							-					
9-		ľ					-	!				
_							-					
10 - PSZ1							-					
11 - 10							-					
-							-					
12-			~750/ ~	-25% fine to seems and			-					
13-			~75% gravel, ▼	~25% fine to coarse sand			-					
14							_ -					
14		-	Geom	-4		I =		. N	005.5	RMR		
			Geom	atrix Consultants		P	rojec	No 7190	005.0	Page 1 of 3		

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-48 (cont'd) SAMPLES PID READING (ppm) Sample Blows/ 6 inches DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 48-16 17 gray (7.5YR 5/1), ~80% gravel, ~20% fine to coarse sand 18 19 20 48-20 21 22 brown (10YR 5/3), ~85% gravel, ~15% fine to coarse sand 23 24 25 48-25 26 27

28

29

30

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-48 (cont'd) SAMPLES PID READING (ppm) Sample Blows/ 6 inches DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 32 33-34 35 48-36 37 38 39 40 Boring backfilled with bentonite chips and Bottom of boring at 40.5 ft bgs continuously hydrated 41 Surface patched with asphalt 42-43-44 45-46-47

Geomatrix Consultants

RMRK3

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Project No. 7190.005.0

48

BORING LOCATION: PerkinElmer SEG 42 mms (NAVO 88) DRILLING CONTRACTOR: Layne Christenson, Co. SIGNOT STARTED: DATE STARTED: JOHN JOHN JOHN JOHN JOHN JOHN JOHN JOHN	PROJECT: AZUSA/IRW Azusa and Ir				Log	of Boring	No. PS	SZB-49
DRILLING CONTRACTOR: Layne Christenson, Co. Signolos Signolos Signolos Signolos Signolos Signolos Signolos Signolos Signolos Signolos Signolos DRILLING METHOD: Dual Wall Air Percussion Als. FIRST Complete 24 HIS. NA NA NA NA NA NA NA NA NA N							3)	
DRILLING METHOD: Dual Wall Air Percussion 40,5 Ground surface Gr	DRILLING CONTRACTOR:	Layne Chris	stenson, Co.		DATE START	DATE FINIS	HED:	
DRILLING ECUIPMENT: Foremost Drills AP-1000 MATER NA NA NA NA NA NA NA NA NA NA NA NA NA	DRILLING METHOD: Dua	l Wall Air Pe	ercussion		TOTAL DEPT			
HAMMER WEIGHT: NA DROP: NA RESPONSIBLE PROFESSIONAL: REG.NO. 6612 SAMPLES SAM	DRILLING EQUIPMENT: Fo	oremost Dril	ls AP-1000		WATER	NA .	i .	
DROP: NAME (USGs): color, moist, % by wt. pleat. density, structure, coemeration, react. which (Jego. inter.)	SAMPLING METHOD: Cut	ttings from c	yclone		P. Jeffers			
NAME (USCS): color, molist, % by wt. pleat density, shudure, coementation, react, which (geo, intert). Surface Elevation: 566.42 ft mst (NAVD 88) 147 asphall POORLY GRADED GRAVEL with SAND (GP): dark brown (7.5YR 3/4), molist, ~65% gravel, ~35% medium to coarse sand 1523 3 - 64-23 4 - 47 asphall POORLY GRADED SAND with GRAVEL (SP): brown (7.5YR 4/4), molist, ~75% gravel, ~35% fine to medium sand, ~30% gravel POORLY GRADED GRAVEL with SAND (GP): light gray (5Y 7/1), molist, ~75% gravel, ~25% fine to medium sand POORLY GRADED GRAVEL with SAND (GP): light gray (5Y 7/1), molist, ~75% gravel, ~25% fine to medium sand POORLY GRADED GRAVEL with SAND (GP): light gray (5Y 7/1), molist, ~75% gravel, ~25% fine to medium sand POORLY GRADED GRAVEL with SAND (GP): light gray (5Y 7/1), molist, ~75% gravel, ~25% fine to medium sand POORLY GRADED GRAVEL with SAND (GP): light gray (5Y 7/1), molist, ~75% gravel, ~25% fine to medium sand			DROP: NA			E PROFESSIO	ONAL:	
Hand augered to 1.5 feet below ground surface (bgs) 1		NAME (USC	6): color, moist, % by wt., plas	t. density, structu . inter.	re,	PID ADING	RE	MARKS
POORLY GRADED GRAVEL with SAND (GP): dark brown (7.5YR 3/4), moist, ~65% gravel, ~35% medium to coarse sand PSZB 3-49-32 POORLY GRADED SAND with GRAVEL (SP): brown (7.5YR 4/4), moist, ~70% fine to medium sand, ~30% gravel POORLY GRADED GRAVEL with SAND (GP): light gray (SY 7/1), moist, ~75% gravel, ~25% fine to medium sand POORLY GRADED GRAVEL with SAND (GP): light gray (SY 7/1), moist, ~75% gravel, ~25% fine to medium sand POORLY GRADED GRAVEL with SAND (GP): light gray (SY 7/1), moist, ~75% gravel, ~25% fine to medium sand POORLY GRADED GRAVEL with SAND (GP): light gray (SY 7/1), moist, ~75% gravel, ~25% fine to medium sand POORLY GRADED GRAVEL with SAND (GP): light gray (SY 7/1), moist, ~75% gravel, ~25% fine to medium sand	o o u o Suri		566.42 ft msl (NAVD 88)			RE		
14	1- PSZB 49-1 2- PSZB 49-2-5 4-	POORLY GF (7.5YR 4/4),	MOIST, ~65% gravel, ~35% to the control of the cont	L (SP): brown a sand, ~30% g	ravel		Drilled to 4 casing and Lithology a cuttings co	0.5' bgs with 9" hammer bit ssessed from llected through
RMRG								
		Goor	natrix Consultante		T _{Dr}	niect No. 7190	004.0	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-49 (cont'd) SAMPLES PID READING DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued ~85% gravel, ~15% fine to medium sand 15-PSZB 49-15 16 17 18 19 ~70% gravel, ~30% fine to medium sand 49-20 21 22-23 24 POORLY GRADED SAND with GRAVEL (SP): light brown (7.5YR 6/4), moist, ~75% fine to medium sand, ~25% gravel 25 PSZB 49-25 26 27 28 POORLY GRADED GRAVEL with SAND (GP): light brown 29 (7.5YR 6/4), moist, ~85% gravel, ~15% fine to medium sand PSZB **Geomatrix Consultants** Project No. 7190.004.0 Page 2 of 3

PROJECT: AZUSA/IRWINDALE STUDY AREA
Azusa and Irwindale, California
Log of Bo

Log of Boring No. PSZB-49 (cont'd)

				Log of Doi	my n	io. Po	1 LU-4 3	(cont a)
EPTH feet)	SAMF		DESCRIPTION NAME (USCS): color, moist, % by wt., plast, d	ensity, structure,		Oi NG (Ed		REMARKS
D	Sar Sa	움을	cementation, react. w/HCl, geo. ii	nter.		REA (p		
32- 33- 34- 35- 36- 37- 38- 39-	SAMF ON ON SZB 9-35	_	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. of cementation, react. w/HCl, geo. in POORLY GRADED GRAVEL with SAND (POORLY GRADED SAND (SP): brown (** -95% medium sand, ~5% gravel POORLY GRADED GRAVEL with SAND ((7.5YR 6/4), moist, ~60% gravel, ~40% fine) Bottom of boring at 40.5 ft bgs	GP): continued IOYR 5/3), moist,	9	PID READING T (ppm) C	Boring ba	<u> </u>
45- - 46-								
47								
	~							RMRK3
	Manuary 1	/	Geomatrix Consultants		Project N	No. 7190.0	004.0	Page 3 of 3

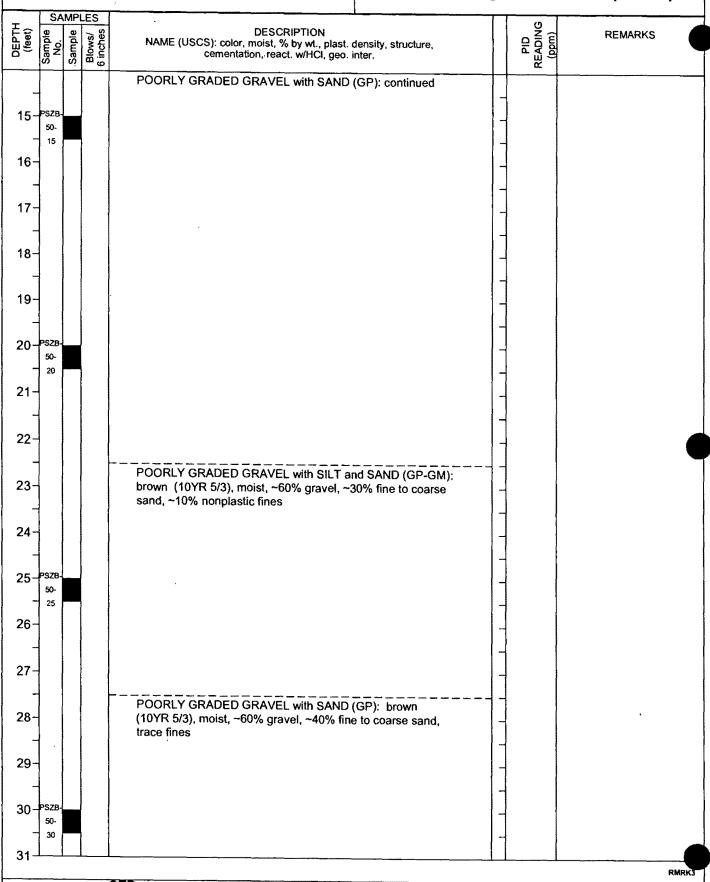
	VIRWINDALE STUDY AREA and Irwindale, California	Log	Log of Boring No. PSZB-50						
BORING LOCATION:	PerkinElmer	•	AND DATUM	0)	.				
		DATE START	nsl (NAVD 88 FED	B) DATE FINI	SHED:				
JRILLING CONTRAC	TOR. Layne Christenson, Co.	2/14/06		2/14/06					
ORILLING METHOD:	Dual Wall Air Percussion	TOTAL DEPT	ГН (ft):	MEASURIN Ground s					
DRILLING FOLLIPME	NT Foremost Drills AP-1000	DEPTH TO	FIRST	COMPL.	24 HRS.				
	Toleflost Dills AF-1000	WATER LOGGED BY	NA	NA	NA				
SAMPLING METHOD	Cuttings from cyclone	K. Zeiler	:						
HAMMER WEIGHT:	NA DROP NA		LE PROFESSION	ONAL:	REG NO 6612				
SAMPLES	DESCRIPTION NAME (USCS) color, moist, % by wt , plas		PID READING (ppm)	RE	EMARKS				
Sample No. Sample Blows/ 6 inches	cementation, react. w/HCl, geo	o. inter	PID SADIN						
S s S S S S S S S S S S S S S S S S S S	Surface Elevation: 570.89 ft msl (NAVD 88)		RE						
	~4" asphalt]		to 5 feet below				
7 1 1					rface (bgs) by onmental on				
1 PSZB-			-	2/8/06	on a second				
- 1			-	41 4 0 51					
2-					2.5' samples ed from sidewalls of				
_PSZB				boring and	l 5' sample with				
50-				hand auge	er on 2/8/06				
3- 25			-						
-					10.5' bgs with 9' d hammer bit				
4-				casing and	a nammer bit				
7				Lithology a	assessed from				
1			17	cuttings co	ollected through				
5 PSZB	·		1-	the cyclon	е				
50-									
6-			17						
1	POORLY GRADED GRAVEL with SANI		17						
7-	(2.5Y 5/2), moist, ~55% gravel, ~45% fir fines	ie to coarse sand, trace							
_PSZB									
50-					•				
8- 7.5									
			-						
9-	~65% gravel, ~35% fine to coarse sand,	trace fines	14	Difficult dr	rilling				
]	1				-				
_	'								
10 — PSZB-			-						
10									
11-									
''									
7 1 1			-						
12-			1-						
1									
13-	}								
-	1		1-						
14				<u>.</u>					
	//00=	·	= -		RMR				
	Geomatrix Consultants	Pr	oject No 7190	005.0	Page 1 of 3				

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California

Log of Boring No. PSZB-50 (cont'd)

Project No. 7190.005.0

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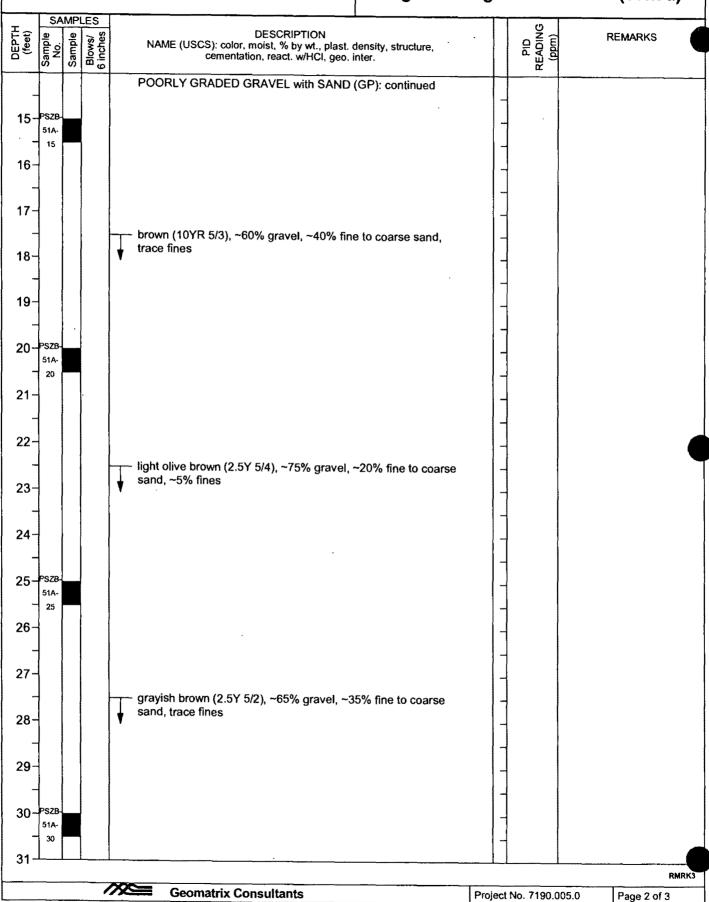
Geomatrix Consultants

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-50									(cont'd)
DEPTH (feet)	Sample No.	Sample	Blows/ m 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast, concernentation, react, w/HCl, geo. i	density, structure, nter.		PID READING (ppm)	F	REMARKS
				POORLY GRADED GRAVEL with SAND	GP): continued				
-									
32-									
-				~55% gravel, ~45% fine to coarse sand, tr	ace fines	11			
33-				•					
34-									
34-									
25	PSZB.			,					
35-	50-								
36-	35				·				
30-									
37-									
37									
38-				~65% gravel, ~35% fine to coarse sand, tr	ace fines				
_				•					
39-									
40-	PSZB-								
٦U 	50-				•				ckfilled with
41-	40			Bottom of boring at 40.5 ft bgs					chips and Isly hydrated
1 T								Surface pasphalt	atched with
42-								aopiiait	
7 <u>2</u> _									
43-									
44-									
45-									
- -0									
46-									
				•					
47-						1			
¬1 -									
48-									
									RMRK3
·····				Geomatrix Consultants		Project	No. 7190.	005.0	Page 3 of 3

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California	Log o	f Boring	g No. PS	SZB-51
BORING LOCATION: PerkinElmer	ELEVATION A		٥١	
	571.17 ft ms		DATE FINIS	SHED:
DRILLING CONTRACTOR: Layne Christenson, Co.	2/14/06	-	2/14/06	
DRILLING METHOD: Dual Wall Air Percussion	TOTAL DEPTH	l (ft.):	MEASURIN Ground s	
DOWN IN O FOUNDATION FOR THE AD 4000	DEPTH TO	FIRST	COMPL.	24 HRS.
DRILLING EQUIPMENT: Foremost Drills AP-1000	WATER	NA	NA	NA
SAMPLING METHOD: Cuttings from cyclone or as noted in remarks	LOGGED BY: K. Zeiler			
HAMMER WEIGHT: NA DROP: NA	RESPONSIBLE	PROFESSI	ONAL:	REG. NO.
	G. Rees	1	<u> </u>	6612
DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, st cementation, react. w/HCl, geo. inter. SAMPLES Page 10	ructure,	PID READING (ppm)	RE	MARKS
Surface Elevation: 571.17 ft msl (NAVD 88)		A B		
~3" asphalt				o 5 feet below
1		1		face (bgs) by nmental on
1 - PSZB		4	2/8/06	inientai on
51-		4		
2-			1' and 2.5'	samples om sidewalls o
PSZB			boring and	5' sample with
51-		7	hand auge	r on 2/8/06
3- 25		-		
4 1		4		0.5' bgs with 9 I hammer bit
4-			July and	Tioninio Di
				ssessed from
				llected through
5_PSZB		1	the cyclone	9
5		+		
6-		4		
POORLY GRADED GRAVEL with SAND (GP): gr	avish brown			
(2.5Y 4/2), moist, ~60% gravel, ~40% fine to coars				
7- fines		1		
_PSZB		1		
8-75		-		
4				
9-				
~				
7		17		
10 PSZB 51-		H	Refusal at	10' bgs
- 10		-	Boring bad	ckfilled with
Bottom of boring at 10.5 ft bgs			bentonite	chips and
				sly hydrated
7			asphalt	atched with
12-				
-		-		
13-				
14-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		1		RMR
Geomatrix Consultants	Pro	ject No. 7190	.005.0	Page 1 of 1

	VIRWINDALE STUDY AREA and Irwindale, California		Log of Boring No. PSZB-51A						
BORING LOCATION		ELEVATION /	AND DATUM: ISI (NAVD 8	8)					
DRILLING CONTRAC	CTOR: Layne Christenson, Co.	DATE START		DATE FINIS	SHED:				
	· · · · · · · · · · · · · · · · · · ·	2/15/06 TOTAL DEPT	2/15/06 TH (ft.): MEASURING POINT:						
DRILLING METHOD	Dual Wall Air Percussion	40.5		Ground s	urface				
DRILLING EQUIPME	NT: Foremost Drills AP-1000	DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA				
SAMPLING METHO	D: Cuttings from cyclone	LOGGED BY:							
HAMMER WEIGHT:		K. Zeiler RESPONSIBLE PROFESSIONAL: REG.							
SAMPLES	· · · · · · · · · · · · · · · · · · ·	G. Rees	 -	 	6612				
	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. der	nsity, structure,	PID READING (ppm)	RE	MARKS				
Ceet) (feet) Sample No. Sample Blows/	cementation, react. w/HCl, geo. inte	er.	PID (ppm)						
0 0 0	Surface Elevation: 571.21 ft msl (NAVD 88) ~3" asphalt			Air knifed to	o 5 feet below				
-	SEE BORING LOG FOR PSZB-51 (located a	approximately 6] -	ground sur	face (bgs) by				
1-	feet west) FOR LITHOLOGY TO 10' bgs			BC ² Enviro 2/14/06	nmental on				
4 1 1	· ·								
2-					0.5' bgs with 9* hammer bit				
3-									
37			7						
7									
4-			-	}					
-			-						
5-			-						
-									
6-									
4			14						
7-									
8-	,	•							
°7									
7									
9-		•							
7 1 1	·		-	1					
10-			-						
4			-						
11-			14						
4			14						
12-				1					
·-	POORLY GRADED GRAVEL with SAND (G	iP): vellowich							
12	brown (10YR 5/4), moist, ~55% gravel, ~40								
13-	sand, ~5% fines								
			[]						
14				<u> </u>	RMR				
	Geomatrix Consultants	Pr	oject No. 7190	.005.0	Page 1 of 3				

Log of Boring No. PSZB-51A (cont'd)



Log of Boring No. PSZB-51A (cont'd)

46-47-48-				Geomatrix Consultants		No. 7190.C		RMRK3
46- 47-								
46-								
46-								
46-								
4								
-					-			
4								
1					-			
45-					-	Į.		
4					1 1			
44-			1		1-4			
1					-			
43-					.			
42						;		
42-						1		
4							asphalt	ACHEC WILL
41-				Doctors of boiling at 40.0 It bys			continuou	sly hydrated atched with
4	40			Bottom of boring at 40.5 ft bgs			bentonite	chips and
10	PSZB- 51A-				-		Boring be	ckfilled with
7		1			1-1			
39-								
700					1			
					17			
38-				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				
4					ice fines		i	
37-								
4] -			
36-		1			-			
-	35				-		1	
35-	PSZB- 51A-				-			
	Bezo							
V7					1		-	
34-]			
33-			ı					
4								
32-					14			
4				COLUMN CO	Jr J. Continued			
	"	"	9 2	POORLY GRADED GRAVEL with SAND (<u>«</u>	***************************************	
(feet)	Sample No.	Sample	Blows/ 6 inches	NAME (USCS): color, moist, % by wt., plast. di cementation, react. w/HCl, geo. in	ensity, structure, ter.	PID READING (ppm)		1
트ᇎ		MPL		DESCRIPTION		SNG (c	R	EMARKS

PROJECT: AZUSA/IRWIN Azusa and Irwi	DALE STUDY AREA indale, California		Log of I	3oring	9 No. PS	SZB-52	
BORING LOCATION: Perkin	-		ATION AND I		3)		
DRILLING CONTRACTOR: La	ayne Christenson, Co.		STARTED:		DATE FINISHED: 3/2/06		
DRILLING METHOD: Dual V	Vall Air Percussion		L DEPTH (ft.):	MEASURING POINT: Ground surface		
DRILLING EQUIPMENT: Fore	emost Drills AP-1000	DEPT	HTO F	RST A	COMPL.	24 HRS. NA	
SAMPLING METHOD: Cuttin	igs from cyclone or as noted in rema	LOGG	GED BY: effers		1 = 11 = 1	1	
HAMMER WEIGHT: NA	DROP: NA		PONSIBLE PR	ROFESSIO	DNAL:	REG. NO. 6612	
DEPTH (feet) (feet) No. No. Sample Salows/ Carlones Carlo	DESCRIPTION IAME (USCS): color, moist, % by wt., plast. cementation, react w/HCl, geo. i	density, structure,		PID READING (ppm)	RE	MARKS	
CEPTH (feet) Sample No. Sample Sample Sample No. Sinches Sample Sinches Sample Sinches Sample Sinches Sample Sinches Sample Sinches Sample Sinches Sample Sinches Sample Sinches Sinch	e Elevation: 569.66 ft msl (NAVD 88)			REA (P			
1 - PSZB - 1 2 - 1 2 - PSZB - 52- 3 - 25 - 5 6 7 - PSZB - 52- 8 - 7.5	DORLY GRADED GRAVEL with SAND of 5YR 4/3), moist, ~75% gravel, ~25% find one fines the gray (Gley 7/1), ~70% gravel, ~30% fines 35% gravel, ~15% fine to coarse sand	ie to coarse sand,			1' and 2.5' collected fr boring Drilled to 4 casing and	0.5' bgs with 9" hammer bit ssessed from llected through	
13-							
14						RMRK3	
1730=	■ Geomatrix Consultants		Project	No. 7190.	005.0	Page 1 of 3	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-52 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 52-15 16 17 ~80% gravel, ~20% fine to coarse sand 18 19-20 52-21 22. 23 24 25 52-25 26 27 POORLY GRADED SAND with GRAVEL (SP): brown 28 (10YR 5/3), moist, ~70% fine to coarse sand, ~30% gravel, trace fines 29 52-

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RMRKS

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Project No. 7190.005.0

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-52 (cont'd) SAMPLES PID READING (ppm) **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued 32 ~80% fine to coarse sand, ~20% gravel 33 34 35 52-36 37 ~85% fine to coarse sand, ~15% gravel 38-39-52-Boring backfilled with bentonite chips and Bottom of boring at 40.5 ft bgs continuously hydrated 41 Surface patched with asphalt 42-43-44 45 46 47 48 RMRK3 **Geomatrix Consultants**

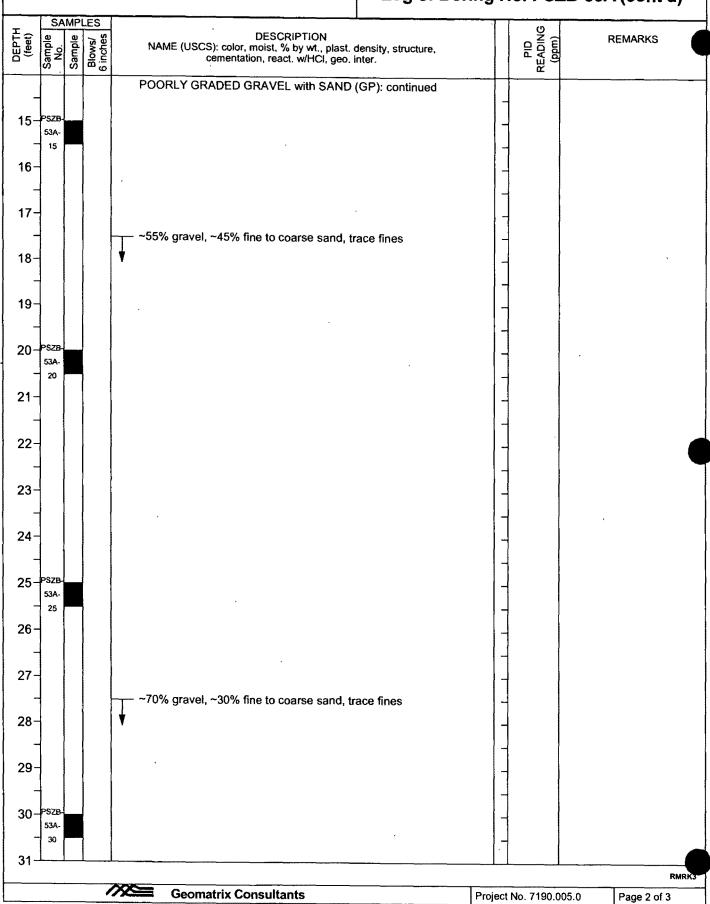
Project No. 7190.005 0

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	/IRWINDALE STUDY AREA and Irwindale, California	Log of Boring No. PSZI					
BORING LOCATION	PerkinFlmer	ELEVATION A					
		568.65 ft m		3) DATE FINISHED.			
RILLING CONTRAC	TOR: Layne Christenson, Co.	2/21/06	ED:	2/21/06			
NOW I THE METHOD	Duel Mail Air Deservation	TOTAL DEPTI	H (ft.):	MEASURING POINT:			
PRILLING METHOD.	Dual Wall Air Percussion	12.5		Ground surface			
RILLING EQUIPMEN	IT. Foremost Drills AP-1000	DEPTH TO WATER	FIRST	COMPL 24 HRS			
		LOGGED BY.		INA INA			
SAMPLING METHOD:	Cuttings from cyclone or as noted in remarks	K. Zeiler					
HAMMER WEIGHT	NA DROP: NA	RESPONSIBL G. Rees	.E PROFESSIO	ONAL. REG. NO. 6612			
Ceet) (feet) Sample No. Sample Blows/ 6 inches	DESCRIPTION NAME (USCS) color, moist, % by wt., plast density, str cementation, react. w/HCl, geo inter	ucture,	PID READING (ppm)	REMARKS			
(fer Samp No. Samp Samp	Surface Elevation 568.65 ft msl (NAVD 88)		RE. A				
	~3" asphalt			Hand augered to 2 feet			
4 1 1	POORLY GRADED SAND with GRAVEL (SP): dark		-	below ground surface (bgs			
1 _PSZB	(10YR 4/3), moist, ~80% fine to coarse sand, ~15%	gravel,					
53-	~5% fines			1' and 2.5' samples			
1	~60% fine to coarse sand, ~35% gravel, ~5% fines			collected from sidewalls of			
2-	[♥		-	boring			
_PSZB				Large cobbles			
53-				Large cobbies			
3- 25				Drilled to 12.5' bgs with 9"			
4 1	POORLY CRAPER CRAVE WILL CAME (CR)		-	casing and hammer bit			
4-	POORLY GRADED GRAVEL with SAND (GP): gra (2.5Y 5/2), moist, ~70% gravel, ~30% fine to coarse						
7	fines	Sano, Iracc		Lithology assessed from			
				cuttings collected through			
5-PSZB-			-	the cyclone			
53-							
7 5							
6-] -				
4 1 1	POORLY GRADED GRAVEL (GP): grayish brown		1-				
7-	moist, ~100% gravel, trace fine to coarse sand, trace	e fines					
.							
PSZB 53-			17				
8-75			14				
	DOODLY CRAPES OF AVEL 11 OAND (OF)		4				
9-	POORLY GRADED GRAVEL with SAND (GP): gra (2.5Y 5/2), moist, ~55% gravel, ~45% fine to coarse						
-	fines	, carra, acace	1-1				
10-PSZB							
53-		•		Ì			
10			-				
11-			14				
7			17	mire. A ASIE			
12-			1-	Difficult drilling			
4			1 1	Refusal at 12.5' bgs			
40	Bottom of boring at 12.5 ft bgs			Boring backfilled with			
13-			17	bentonite chips and continuously hydrated			
-			14	Surface patched with			
1 1 1				asphalt			
14				1			

, \UJL				IRWINDALE STU Ind Irwindale, Cal			Log of Boring No. PSZB-5					
ORIN	G LO	CAT	ION [.]	PerkinElmer			EVATION			n\		
						568.69 ft msl (NAVD 88) DATE STARTED: DATE FINISH					SHED	
RILLI	NG C	ГИО	RACT	ron: Layne Chris	tenson, Co.		2/22/06 2/22/06					
DULL	NG M	ETL	IOD:	Dual Wall Air Pe	roussion	TC	TOTAL DEPTH (ft.): MEASURING POINT					
JIVILLI				Dual Wall All Fe).5			Ground s		
RILLI	NG E	QUII	PMEN	T: Foremost Drill	s AP-1000	I .	PTH TO		IRST NA	COMPL.	24 HRS. NA	
							ATER OGGED BY		VA.	INA	INA	
SAMPL	ING I	MET	HOD.	Cuttings from cy	clone		Zeiler					
IAMM	ER W	EIG	нт	NA	DROP: NA		SPONSIB . Rees	LE P	ROFESSI	ONAL:	REG NO. 6612	
	SA	MPL		<u></u> _	DESCRIPTION			П	ပ			
DEPTH (feet)	Sample No	Sample	Blows/ 6 inches	NAME (USCS) color, moist, % by wt , plast, den ementation, react, w/HCl, geo inte	nsity, structure,			PID READING (ppm)	RE	EMARKS	
8€	Samp	Sam	용의					1	- A a			
	9,		· · ·	~3" asphalt	568.69 ft msl (NAVD 88)			H		······································		
			ľ		LOG FOR PSZB-53 (located a	pproximately	<u> </u>	1]				
					R LITHOLOGY TO 12.5' bgs	.pp.o/moiory						
1-			l	·	_			11				
****								$ \cdot $				
2-		İ		•								
4		1										
_		I						11				
3-		Ì						14			0.5' bgs with 9	
_										casing and	d hammer bit	
		İ										
4		1						$ \cdot $			assessed from ollected through	
•								14		the cyclon		
E										and dyonon		
5-												
-						ý.						
6-												
					•							
. –]											
7-	1							1-				
_												
_								11				
8-						,		11				
_	-											
9-										ļ		
J												
-	1											
10-	1											
_							•					
11-	1											
-	1							-				
12-	_							_				
1 4												
_	1			POORLYGE	ADED GRAVEL with SAND (G	P): gravish hr		-				
13-	4				oist, ~65% gravel, ~35% fine to			-				
				fines	•							
				-				-	1			
14-	-l		L								RMF	
				Geom	atrix Consultants				No 7190		Page 1 of 3	

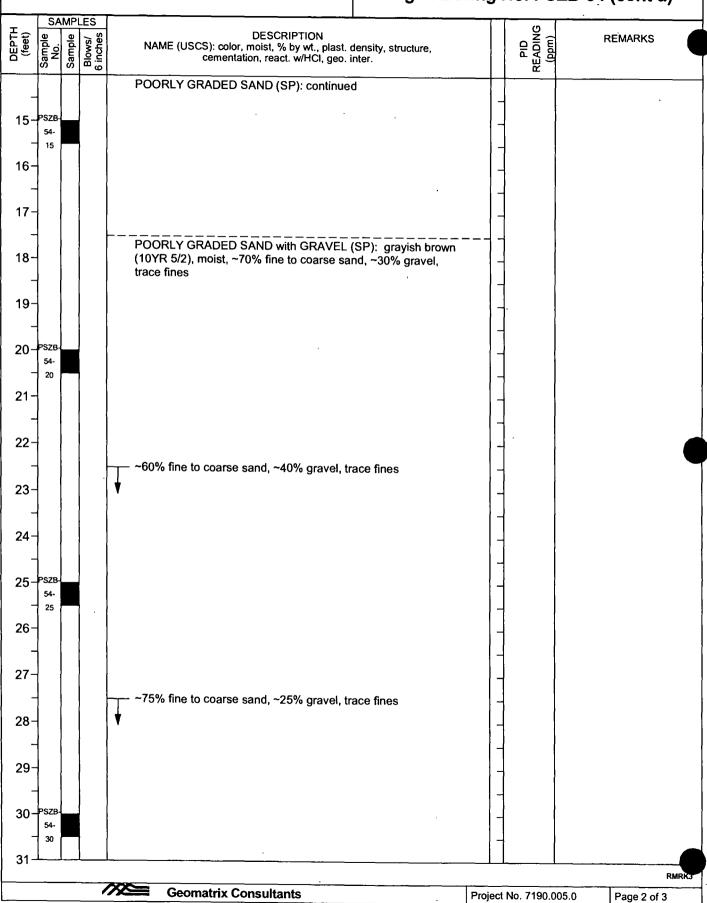
Log of Boring No. PSZB-53A (cont'd)



	64			and Irwindale, California	Log of Bo	nng N			(cont'd)
(feet)	Sample S	Sample 4	Blows/ T	DESCRIPTION NAME (USCS): color, moist, % by wt., plas cementation, react. w/HCl, ged	t. density, structure, o. inter.		PID READING (ppm)	F	REMARKS
				POORLY GRADED GRAVEL with SAN	D (GP): continued				
32-									
22									
33-									
34									
34]						11			•
35-	PSZB-								
-	53A- 35								•
36-	•								
_								-	
37-									
_				~60% gravel, ~40% fine to coarse sand	, trace fines				
38-				\					
4									
39-									
-									
40-	PSZB- 53A-					1-		Boring ha	ckfilled with
-	40			Bottom of boring at 40.5 ft bgs				beritonite	chips and
41-				3		-		Surface p	usly hydrated patched with
-						-		asphalt	
42-						-			
		Ì				-			
43-						-			
						1-1			
44-									
A.E									
45-									
46-						11			
70									
47-									
``_									
48-									
. •									RM

	SA/IRWINDALE STU sa and Irwindale, Cal		Log	of Bo	ring No.	PSZB-54
	N. PerkinElmer		ELEVATION			***************************************
		Annan Ca	566.99 ft DATE STAR			INISHED:
URILLING CONTR	ACTOR: Layne Chris	tenson, Co.	2/21/06	TIL (6 :	2/21/0	6
DRILLING METHO	D Dual Wall Air Pe	rcussion	TOTAL DEF	≺IH (#).	1	RING POINT: d surface
DRILLING FOUIP	MENT: Foremost Drill	s AP-1000	DEPTH TO		COMPL	24 HRS.
			WATER LOGGED B	NA Y	, NA	NA NA
SAMPLING METH	OD: Cuttings from cy	clone or as noted in remarks	K. Zeiler			
HAMMER WEIGH	T: NA	DROP: NA	G. Rees	BLE PROF	ESSIONAL:	REG. NO. 6612
SAMPLE		DESCRIPTION			ගු	
Sample No Sample Sample No Sample Blows/	NAME (USCS	b): color, moist, % by wt., plast, density, sementation, react w/HCl, geo, inter.	structure,	Qa	N (mad	REMARKS
San San San San San	Surface Elevation:	566 99 ft msl (NAVD 88)		 	A FE	
	~3" asphalt			41		ugered to 2.5 feet
+	CONSTRUCT	TON FILL: sand and gravel			below g	round surface (bgs)
1 PSZB	•					.5' samples'
- 1				-	boring	d from sidewalls of
2-						sphalt clasts or
PSZB-					layer at	zu" bgs
3-25					Drilled t	o 40.5' bgs with 9"
3- 25						and hammer bit
7		ADED GRAVEL with SAND (GP): g		-		,
4-	(2.5Y 5/2), mo	oist, ~65% gravel, ~35% fine to coar	se sand, trace	17		y assessed from collected through
-	lilles			1+	the cyc	
5 - PSZB						
54-				14		i
6-						
	0007	400/ 5 - 4				
.]	T ~60% gravei,	~40% fine to coarse sand, trace fine	es			
7-	▼					
_PSZB 54-				-		
8-75				14		
4 1 1				14		
9-						
].		
10 - PSZB					Difficul	t drilling
10				1+		J
11-				-		
				14		
12-		•				
,						
		ADED SAND (SP): grayish brown		77		
13-	moist, ~90%	fine to coarse sand, ~10% gravel, tr	ace fines			
-				-		
14		ability desired to the second			l	RMRK:
ļ	//X Geom	atrix Consultants		Project No.	7190.005 0	Page 1 of 3
						1 - 3

Log of Boring No. PSZB-54 (cont'd)



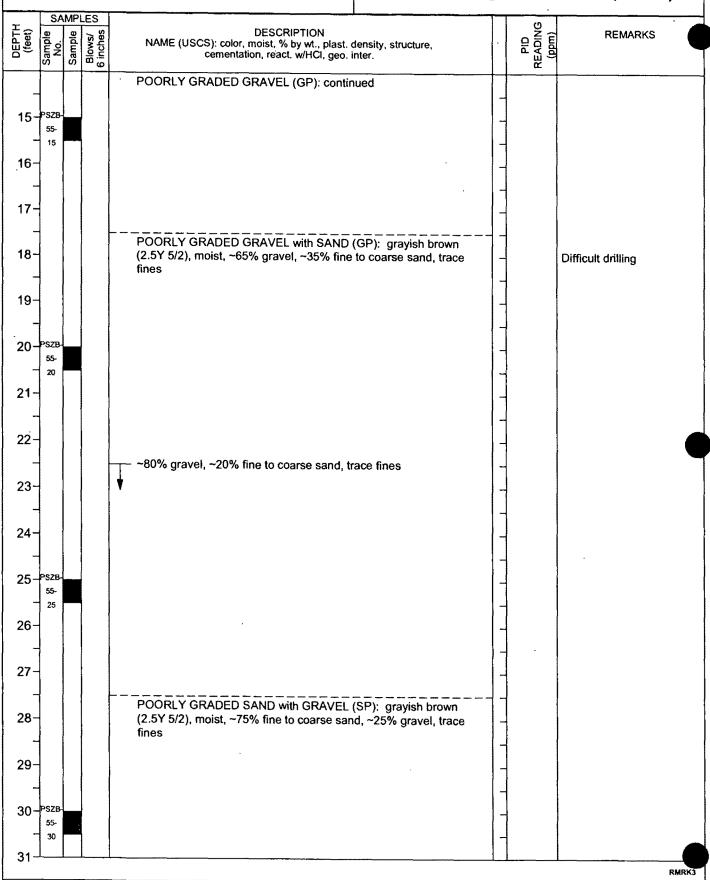
PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-54 (cont'd) SAMPLES PID READING DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued 32-POORLY GRADED GRAVEL with SAND (GP): grayish brown 33 (2.5Y 5/2), moist, ~65% gravel, ~35% fine to coarse sand, trace 34 35-Cobbles 36 37 ~80% gravel, ~20% fine to coarse sand, trace fines 38 39-Boring backfilled with bentonite chips and Bottom of boring at 40.5 ft bgs continuously hydrated 41 Surface patched with asphalt 42 43 44 45 46 47 48 RMRK3 **Geomatrix Consultants**

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OJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California	Log	of Boring	g No. P	SZB-55	
PRING LOCATION: PerkinElmer	ELEVATION A				
Tano Econtrol. Girillemes	565.77 ft ms			OUT O	
RILLING CONTRACTOR: Layne Christenson, Co.	2/17/06	DATE STARTED: DATE FINISHED: 2/17/06 2/17/06			
RILLING METHOD: Dual Wall Air Percussion	TOTAL DEPTH	I (ft.):	MEASURIN	NG POINT:	
ILLING METHOD. Duai Wall All Percussion	40.5		Ground s		
RILLING EQUIPMENT: Foremost Drills AP-1000	DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA	
MPLING METHOD: Cuttings from cyclone or as noted in remarks	LOGGED BY: K. Zeiler				
	RESPONSIBL	E PROFESSI	ONAL:	REG. NO.	
	G. Rees			6612	
SAMPLES SAMPLES DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, seementation, react. w/HCl, geo. inter. Surface Elevation: 565.77 ft msl (NAVD 88)	structure,	PID READING (ppm)	R	EMARKS	
Surface Elevation: 565.77 ft msl (NAVD 88)		RE)			
~3" asphalt				to 5 feet below	
1		-		rface (bgs) by	
1_PSZB		4	2/9/06	onmental on	
55-		_			
			1' and 2.5'		
2-		1		rom sidewalls o I 5' sample with	
_PSZB	,	4		er on 2/9/06	
3-25		4	_		
		,	Drilled to	40.5' bgs with 9'	
		7	casing and	d hammer bit	
4-		; -			
-				assessed from ollected through	
5 -PSZB			the cyclon		
55-					
5		1			
6-		-			
POORLY GRADED GRAVEL (GP): grayish brow	m (2.5Y.5/2)				
moist, ~90% gravel, ~10% fine to coarse sand, tra					
7-			Cobbles		
_PSZB		-			
8-75					
POORLY GRADED SAND with GRAVEL (SP): g	grayish brown	17			
9- (2.5Y 5/2), moist, ~75% fine to coarse sand, ~25%	% gravel, trace] -			
fines		1 -			
10 -PSZB					
55-		17			
10		1 -			
11-		14			
12-		11			
		44			
POORLY GRADED GRAVEL (GP): grayish brov moist, ~90% gravel, ~10% fine to coarse sand, tr					
10	ave imes				
1		-			
14			1	RMR	
Geomatrix Consultants		ject No. 7190	005.0	Page 1 of 3	

Log of Boring No. PSZB-55 (cont'd)



		Az	usa a	IRWINDALE STUDY AREA nd Irwindale, California	Log of Bo	ring N	No. PS	ZB-55	(cont'd)
(feet)	Sample S No.	Sample		DESCRIPTION NAME (USCS): color, moist, % by wt., plast, cementation, react, w/HCl, geo.	density, structure,		PID READING (ppm)	F	REMARKS
	0,	"	- 4	POORLY GRADED SAND with GRAVEL	(SP): continued		<u>«</u>		
				The state of the s	(Or). Continued	1-			
32-						[-]	1	Difficult d	rilling
-			F	~55% fine to coarse sand, ~45% gravel, to	ace fines	14			
33-				*		1-			
_						1-1			
34-]-			
						-			
35-	55-					1-			
20	35					-			
36-									
37-						17			
"			1						
38-							:		
39-									
4		أ							
40-	PSZB-								
4	55- 40		-	Dather of heart 100 file				Boring ba	ckfilled with chips and
41-				Bottom of boring at 40.5 ft bgs				continuo	usly hydrated patched with
_								asphalt	Pateneu Willi
42-									
-						-			
43-						-			
+						-			
44-									
-						-			
45-						1-1			-
۲,						14			
46-						-			
,,						-			
47-						-	;		
48									
+0								L	RMI
			17	Geomatrix Consultants		Project	No. 7190.0	005.0	Page 3 of 3

		IRWINDALE ST and Irwindale, Ca					g No. P	SZB-56	
BORING LOC	ATION:	PerkinElmer		ELEVATION			٥١		
DDILLING CO	NITDAC	TOP: Lavas Chair		565.17 ft r			DATE FINIS	SHED:	
	INTRAC	ron: Layne Chris	stenson, Co. 	2/15/06			2/15/06		
DRILLING ME	THOD:	Dual Wall Air Pe	ercussion	TOTAL DEP	TH (f	t.):	Ground s	RING POINT:	
DRILLING EO	HIDMEN	T: Foremost Drill	Is AP 1000	DEPTH TO	_ I ·	IRST	COMPL.	24 HRS.	
	CON WILLY	- Toremost Dilli		WATER LOGGED BY		VA	NA	NA	
SAMPLING M	IETHOD:	Cuttings from c	yclone or as noted in remarks	K. Zeiler					
HAMMER WE	IGHT:	NA	DROP: NA	RESPONSIE G. Rees	BLE F	ROFESSI	ONAL:	REG. NO. 6612	
- ·	PLES و	NAME (USCS	DESCRIPTION S): color, moist, % by wt., plast. density	structure		PID READING (ppm)	RE	MARKS	
DEPTH (feet) Sample No.	Sample Blows/ 6 inches		cementation, react. w/HCl, geo. inter.	, 01. 00.0.0,	╛╽	PIC EAD			
L S C	χ <u>a</u> .	Surface Elevation:	565.17 ft msl (NAVD 88)		$\bot \bot$	<u>~</u>			
		~3" asphalt			┪╽			o 5 feet below	
					I	'		face (bgs) by nmental on	
1 - PSZB- 56-							2/14/06		
- 1					$ \cdot $		1' and 2.5'	samples	
2-		٠			-		collected fr	om sidewalls c	
_PSZB-								5' sample with r on 2/14/06	
3- 25					ا ا		nanu auge		
3- 25		•					Drilled to 4	0.5' bgs with 9	
7					١٦			hammer bit	
4-					-				
-								ssessed from llected through	
5_PSZB					_		the cyclon		
56-									
7 5 7			•		-		ļ		
6-					-				
-			RADED GRAVEL with SAND (GP):		-		,		
7-		(2.5Y 5/2), m fines	oist, ~85% gravel, ~15% fine to co	arse sand, trace	-				
PSZB		lines			1		Cobbles		
56-									
8 75					-				
-					-				
9-		~65% gravel	, ~35% fine to coarse sand, trace fi	nes	-				
] ♦	•		_				
10-PSZB							•		
56-		,			-	1			
10					-	1			
11-					-	-			
_					_	1			
12-		!]			
147									
					-	1			
13-					-	1	1		
					-	4			
14				·	[_				
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		Geon	natrix Consultants	P	rojec	t No. 7190	.005.0	Page 1 of 3	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-56 (cont'd) SAMPLES PID READING (ppm) Sample Blows/ 6 inches DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCt, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 56-16 17 18 19 20 56-20 21 22 ~70% gravel, ~30% fine to coarse sand, trace fines 23 24 25 56-26 27 POORLY GRADED SAND with GRAVEL (SP): grayish brown 28 (2.5Y 5/2), moist, ~60% fine to coarse sand, ~40% gravel, trace fines 29

30

56-30

RMRK3 **Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 3

				nd Irwindale, California	Log of Bo	oring N	lo. PS	ZB-56	(cont'd)
(feet)		Sample	Blows/ E	DESCRIPTION NAME (USCS): color, moist, % by wt., plast.	density, structure,		PID READING (ppm)	F	REMARKS
Sar	\mathbb{Z}	Sar	e in	cementation, react, w/HCl, geo.	inter.		REA (p)		
				POORLY GRADED SAND with GRAVEL	(SP): continued				
32-						11			
_		\cdot	Ī	~80% fine to coarse sand, ~20% gravel,	trace fines	-			
33-	-		1	Y		-			
				·					
34-									
25 867	,,								
35-PSZ 56	6-					-			
36-	5								
						-			
37-			-						
"]									
38-		1				1			
56	-	-	1						
39-		1							
						17			
40 PSZ	zB-								
56	6-		1]		Boring ba	ckfilled with chips and
41			1	Bottom of boring at 40.5 ft bgs	-			continuo	isly hydrated
	1		Ì					Surface p asphält	atched with
42-	-							,	
43-									
4			-	•					
44				•					
4									
45-									
4									
46-									
4			[•					
47-		- {							
4									
48	\perp								
.0									

PROJECT: AZUSA/IRWIN Azusa and Irw	NDALE STUDY AREA vindale, California	Log	of Boring	g No. PS	SZB-57
BORING LOCATION: Perkin	nElmer		AND DATUM:	0)	
DRILLING CONTRACTOR: I	auna Christopean Ca	DATE STAR	nsl (NAVD 8) TED:	DATE FINIS	HED:
DRILLING CONTRACTOR: L	ayrie Christerison, Co.	2/14/06 TOTAL DEP	TLI /4 \.	2/14/06 MEASURIN	C DOINT:
DRILLING METHOD. Dual V	Wall Air Percussion	40.5	i m (ii.):	Ground si	
DRILLING EQUIPMENT: For	emost Drills AP-1000	DEPTH TO WATER	FIRST NA	COMPL.	24 HRS. NA
SAMPLING METHOD: Cuttir	ngs from cyclone or as noted in remarks	LOGGED BY K. Zeiler	':		
HAMMER WEIGHT: NA	DROP: NA		LE PROFESSI	ONAL:	REG. NO. 6612
Cleet) Cl	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. dens cementation, react. w/HCl, geo. inter.	sity, structure,	PID READING (ppm)	· RE	MARKS
DEPTH (feet) Sample No. Sample Blows/ 6 inches	ce Elevation: 565.04 ft msl (NAVD 88)	·	Re A		
	3" asphalt			Air knifed to	5 feet below
1_PSZB					ace (bgs) by
57-				1' and 2.5' s	samples
2-					om sidewalls of
PSZB				Doning	
3- 2.5				Drilled to 40	0.5' bgs with 9"
3 2.5					hammer bit
				Lithology a	ssessed from
4-				cuttings col	lected through
1 1 1 1 (2	OORLY GRADED GRAVEL with SAND (GP 2.5Y 5/2), moist, ~75% gravel, ~25% fine to c	'): grayish brown coarse sand, trace		the cyclone	•
	nes	,	-		
-			-		
6 PSZB-			-		ollected at 6' and ntained asphalt
6			-	suspect slo	ough of material
7-			-	from above)
_PSZB			-		
8 - 7.5			1-		
9-	-65% gravel, ~35% fine to coarse sand, trace	e fines			
10 -PSZB-					
57-					
10					
12-					
	~75% gravel, ~25% fine to coarse sand, trace	e fines	-		
13-			-		
14					
///	Geomatrix Consultants	I D	roject No. 7190	005.0	Page 1 of 3
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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-57 (cont'd) SAMPLES PID READING Blows/ 6 inches DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 57-15 16 17 POORLY GRADED SAND with GRAVEL (SP): grayish brown 18 (2.5Y 5/2), moist, ~55% fine to coarse sand, ~45% gravel, trace 19 57-20 Difficult drilling 21 22-POORLY GRADED GRAVEL with SAND (GP): grayish brown 23 (2.5Y 5/2), moist, ~60% gravel, ~40% fine to coarse sand, trace 24 25 57-25 26 27 ~70% gravel, ~30% fine to coarse sand, trace fines 28 29 30 57-30 31 RMRK3 **Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 3

ROJE		Az	usa a	/IRWINDALE STUDY AREA and Irwindale, California	Log of Bo	ring N	lo. PS	ZB-57 (cont'd)
(feet)	Sample So	Sample 7	Blows/ m 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast cementation, react. w/HCl, geo	density, structure, inter.		PID READING (ppm)	REMARKS
				POORLY GRADED GRAVEL with SAND	(GP): continued			Difficult drilling
32-								
327				2007				
33-	l			~80% gravel, ~20% fine to coarse sand,	trace fines			
337	i			•		-		
34-								
J4]							!	
35	PSZB-							
33	57- 35							
36-	33							
						17		
37-								
,					trans firms			
38-				graver, 55% line to coarse sand,	trace fines	17		
				•				
39-								
40-	PSZB-					17		
	57- 40							Boring backfilled with
41-	40			Bottom of boring at 40.5 ft bgs				bentonite chips and continuously hydrated
						17		Surface patched with asphalt
42-								обрист
]					·			
43-						17		
44-						17		
								·
45-					•			
46-								
47-								
]								
48						_ 1		
								RMI
				Geomatrix Consultants		Project I	No. 7190.0	005.0 Page 3 of 3

	VIRWINDALE STUDY AREA and Irwindale, California	Log	of Boring	No. P	SZB-58
ORING LOCATION	PerkinElmer		AND DATUM: nsl (NAVD 88	, 21	
DULLING CONTRAC	CTOR: Layne Christenson, Co.	DATE START		DATE FINIS	SHED:
ORILLING CONTRAC	CTOR. Layrie Christenson, Co.	2/16/06 TOTAL DEPT	TLJ /6 \-	2/16/06 MEASURIN	IC POINT:
ORILLING METHOD:	Dual Wall Air Percussion	40.5	п (к.).	Ground s	
ORILLING EQUIPME	NT: Foremost Drills AP-1000	DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA
SAMPLING METHO	D: Cuttings from cyclone or as noted in remarks	LOGGED BY		1134	INA
SAME LING METHOL		K. Zeiler	LE PROFESSIO	ONAI ·	REG. NO.
HAMMER WEIGHT:	NA DROP: NA	G. Rees		J. 6 (C.	6612
(feet) (Sample Sample Sample Blows/ B	DESCRIPTION NAME (USCS): color, moist, % by wt., plast, density, structure cementation, react, w/HCl, geo. inter.	cture,	PID READING (ppm)	RE	EMARKS
San San Sai	Surface Elevation: 564.75 ft msl (NAVD 88)		RE		
	~3" asphalt				to 5 feet below
1					face (bgs) by onmental on
1 PSZB 58-			-	2/9/06	
- 1			-	1' and 2.5'	samples
2-			1+	collected f	rom sidewalls of
_PSZB			1-1		l 5' sample with a er on 2/9/06
3- 25			14		
4			1-		10.5' bgs with 9" did hammer bit
4-				casing and	Trailine Dit
					assessed from
5_PSZB				the cyclon	ollected through e
58-					
7 5			17		٠,
6-					
1	POORLY GRADED SAND with GRAVEL (SP): brow (10YR 5/3), moist, ~75% fine to coarse sand, ~25% g				
7-	trace fines	gravo.,	-		
_PSZB 58-			-		
8- 7.5			-		
4 1	POORLY CRAPED CRAVEL WITH CAND (CR)		44		
9-	POORLY GRADED GRAVEL with SAND (GP): gray (10YR 5/2), moist, ~60% gravel, ~40% fine to coarse				
1	trace fines				
10 - PSZB-					
58-					
10					
11-			17		
			-		
12-			1		
	~70% gravel, ~30% fine to coarse sand, trace fines		1-1		
13-	♦		-		
			-		
14				1	RMRK3
	Geomatrix Consultants	P	roject No 7190	.005.0	Page 1 of 3
	Geomatrix Consultants	, P	rojectivo / 190	.000.0	raye 1013

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-58 (cont'd) SAMPLES PID READING (ppm) Blows/ 6 inches DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 58-16 17 ~60% gravel, ~40% fine to coarse sand, trace fines 18 19 20 58-20 21 22 ~75% gravel, ~25% fine to coarse sand, trace fines 23 24 25 58-26 27 -60% gravel, ~40% fine to coarse sand, trace fines 28 29 30 31 RMRK3 **Geomatrix Consultants**

Project No. 7190.005.0

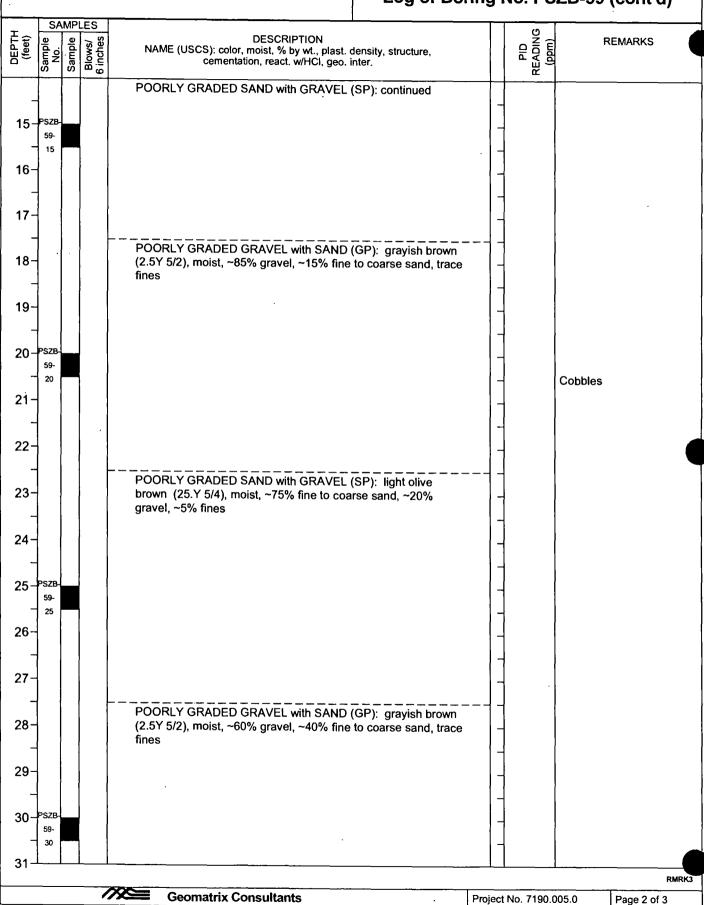
Page 2 of 3

		Az	usa a	and Irwindale, California	Log of Bo	ring N	lo. PS	ZB-58 (cont'd)
		MPL		DESCRIPTION			9	DEMACKS
(feet)	Sample No.	Sample	Blows/ 6 inches	NAME (USCS). color, moist, % by wt., plas cementation, react. w/HCl, ged	t. density, structure, o. inter.		PID READING (ppm)	REMARKS
				POORLY GRADED GRAVEL with SAN	D (GP): continued			
,,								
32-								
,,				~80% gravel, ~20% fine to coarse sand.	, trace fines			
33~				*				
34-						11		
,4						11		
35-	PSZB-		- {					
~_	58- 35							
36− 36−	30							
_								
37-								
4				~65% gravel, ~35% fine to coarse sand	trace fines			
38-				•	, 1100 ,00			
4					·			
39-							'	
4		.						
10-								
-	58- 40			Bottom of boring at 40.5 ft bgs				Boring backfilled with bentonite chips and
11-				Solidin of Boning at 40.5 it bys		-		continuously hydrated Surface patched with
				-		-		asphalt
12-			l			14		
4						-		
13-						-		
+						-		
14-]-		
						-		
15-						-		
						-		
16-						-		
ا								
47-						-		
10								
48-			1	The second secon	***************************************			I RA

DRICLING ECHUMENT: Foremost Drills AP-1000 SAMPLING METHOD: Cuttings from cyclone or as noted in remarks ANNA NA NA NA NA NA NA NA NA NA NA NA NA		IRWINDALE STUDY AREA nd Irwindale, California	Log	of Borin	g No. P	SZB-59	
DATE FIRSHED: DATE FIRSHED: 2/16/06 DATE FIRSHED: 2/16/06 DATE FIRSHED: 2/16/06 DATE FIRSHED: 2/16/06 DATE FIRSHED: 2/16/06 DATE FIRSHED: 2/16/06 DATE FIRSHED: 2/16/06 DATE FIRSHED: 2/16/06 DATE FIRSHED: 2/16/06 DATE FIRSHED: 2/16/06 DATE FIRSHED: 2/16/06 DATE FIRSHED: DATE FIRSHED: 2/16/06 DATE FIRSHED: COMPL. 24 HR NA NA NA NA NA NA NA NA NA NA NA NA NA N	BORING LOCATION:	PerkinElmer			 (8)		
DRILLING METHOD: Dual Wall Air Percussion 1071A DEPTH (It.): 40.5 Ground surface ORILLING EQUIPMENT: Foremost Drills AP-1000 DEPTH 10 FIRST COMPL 24 RE WATER NA NA NA NA NA NA NA NA NA NA NA NA NA	DRILLING CONTRACT	OR: Layne Christenson, Co.	DATE START		DATE FINISHED:		
DRILLING EQUIPMENT: Foremost Drills AP-1000 SAMPLING METHOD: Cuttings from cyclone or as noted in remarks APRILING METHOD: Cuttings from cyclone or as noted in remarks K. Zeiler HAMMER WEIGHT: NA DROP: NA DESCRIPTION CESCRIPTION DESCRIPTION DESCRIPTION CESCRIPTION DESCRIPTION DESCRIPTION DESCRIPTION DESCRIPTION DESCRIPTION DESCRIPTION DESCRIPTION GERSPONSIBLE PROFESSIONAL: RESPONSIBLE PROFESSIONAL: RESPONSIBLE PROFESSIONAL: REPONSIBLE	DRILLING METHOD:	Dual Wall Air Percussion	TOTAL DEPT	TH (ft.):	MEASURIN		
SAMPLING METHOD: Cuttings from cyclone or as noted in remarks (N. Zeiler) HAMMER WEIGHT: NA DROP: NA RESPONSIBLE PROFESSIONAL: REG 66 G. Rees G.	DRILLING EQUIPMEN	T: Foremost Drills AP-1000	DEPTH TO	1	COMPL.	24 HRS.	
HAMMER WEIGHT: NA DROP: NA RESPONSIBLE PROFESSIONAL: REG G. Rees SAMPLES SAMPLES SAMPLES SAMPLES SAMPLES SURface Elevation: 564.59 ft msl (NAVD 88) NAME (USCS): color, moist, % by wh. plast, density, structure. Surface Elevation: 564.59 ft msl (NAVD 88) -3" asphalt -3" asphalt -3" asphalt Air knifed to 5 feet by ground surface (bgs B-crivinomental). 214/06 1 and 2.5' samples acceleration and user on 214, Drilled to 40.5' bgs casing and hammer Lithology assessed cuttings collected the the cyclone POORLY GRADED GRAVEL (GP): grayish brown (2.5Y 5/2), moist, ~100% gravel, trace fine to coarse sand, trace fines POORLY GRADED SAND with GRAVEL (SP): grayish brown (2.5Y 5/2), moist, ~80% fine to coarse sand, ~20% gravel, trace 10 - 823- 10 - 85% fine to coarse sand, ~20% gravel, trace 11 - 85% fine to coarse sand, ~15% gravel, trace fines	SAMPLING METHOD:	Cuttings from cyclone or as noted in remarks	LOGGED BY				
SAMPLES BESCRIPTION NAME (USCS): color, molet, % by wf., plast, density, structure, cementation, react which geo, inter. NAME (USCS): color, molet, % by wf., plast, density, structure, cementation, react which geo, inter. Air knifed to 5 feet to ground surface (typs 2-1) appears to 1 and 2.5' sample hand auger on 2/14. Samples Samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 40.5' samples Air knifed to 5 feet to ground surface (typs 2-1) and 2.5' samples Air knifed to 5 feet to ground surface (ty	HAMMER WEIGHT:	NA DROP: NA	RESPONSIB	LE PROFESSI	IONAL:	REG. NO.	
Air knifed to 5 feet to grown surface (bys. BC Environmental. 2/14/06 1 and 2.5' samples collected from side boring and 5' sample hand auger on 2/14. 5 — PSZB		NAME (USCS): color, moist, % by wt., plast. density, strucementation, react. w/HCl, geo. inter.		PID READING (ppm)	RE		
	1 — PSZB————————————————————————————————————	POORLY GRADED GRAVEL (GP): grayish brown moist, ~100% gravel, trace fine to coarse sand, trace fine to coarse sand, trace (2.5Y 5/2), moist, ~80% fine to coarse sand, ~20% of fines	e fines		ground sur BC² Enviro 2/14/06 1' and 2.5' collected f boring and hand auge Drilled to 4 casing and Lithology a cuttings co	rface (bgs) by conmental on samples from sidewalls of 5' sample with a er on 2/14/06 for the following sample with 9" dissessed from collected through	
	14						
Geomatrix Consultants Project No. 7190.005.0 Page 1 o	'	Geomatrix Consultants	Pi	roject No. 7190	0.005.0	Page 1 of 3	

Log of Boring No. PSZB-59 (cont'd)

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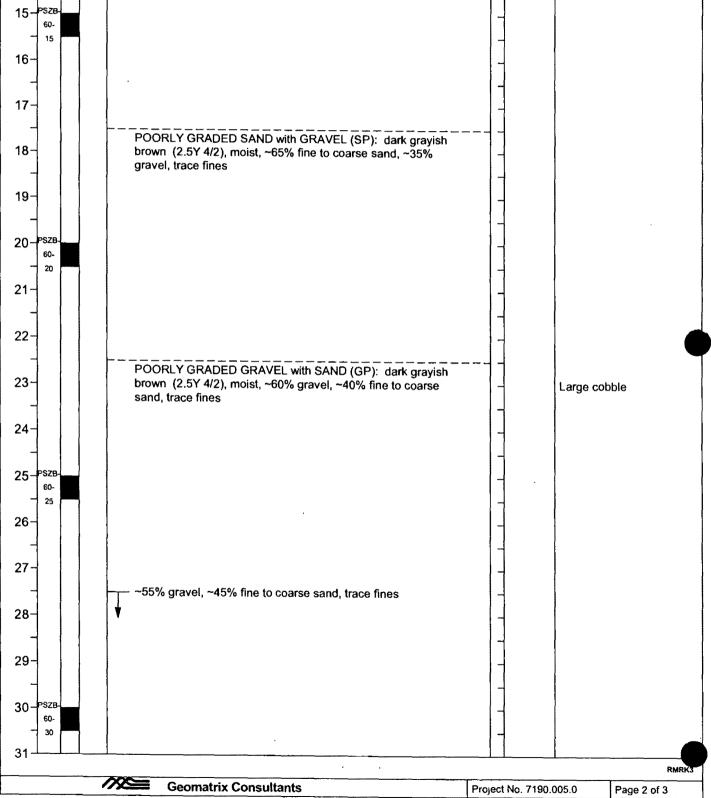


Log of Boring No. PSZB-59 (cont'd)

SAMPLES			υ	
Sample No. Sample Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.		PID READING (ppm)	REMARKS
	POORLY GRADED GRAVEL with SAND (GP): continued	Ħ		
_				
32-				
	POORLY GRADED SAND with GRAVEL (SP): grayish brown	-		
3-	(2.5Y 5/2), moist, ~60% fine to coarse sand, ~40% gravel, trace fines		ļ	
-				
34-		-		
1				
35 - PSZB		-		
35		1-1		
36-		-		
-		-		
37-		-		
-	POORLY GRADED GRAVEL with SAND (GP): grayish brown			
38-	(2.5Y 5/2), moist, ~80% gravel, ~20% fine to coarse sand, trace	-		
	fines	-	•	
39-		-		
-		-		
40 - PSZB-		-	' 	Boring backfilled with
59-	Bottom of boring at 40.5 ft bgs	-		bentonite chips and
41-	Bottom of boning at 40.5 it bgs	-		continuously hydrated Surface patched with
-			•	asphalt
42-		-		
4		_		
43-				
4 .		_		
44-		_		
_		_		
45-		_		
_		_		
46-				
		_		
47-				
T']				
48				
				RM
	Geomatrix Consultants	Projec	t No. 7190.	.005.0 Page 3 of 3

PROJECT: AZUSA/IRWINDALE Azusa and Irwindale,		Log	of Boring	g No. PS	ZB-60	
BORING LOCATION: PerkinElmer		ELEVATION A 561.34 ft m		R)		
DRILLING CONTRACTOR: Layne C	Christenson, Co.	DATE START 2/7/06		DATE FINIS	HED:	
DRILLING METHOD: Dual Wall Ai	r Percussion	TOTAL DEPT 40.5	H (ft.):	MEASURING POINT: Ground surface		
DRILLING EQUIPMENT: Foremost	Drills AP-1000	DEPTH TO	FIRST	COMPL.	24 HRS.	
	m cyclone or as noted in remarks	WATER LOGGED BY:	j NA	NA	¦ NA	
HAMMER WEIGHT: NA	DROP: NA	l l	E PROFESSI	ONAL:	REG. NO.	
SAMPLES	DESCRIPTION	G. Rees	()		6612	
Cfeet) (feet) Sample Name (Control Sample Solutace Elevair Solutace Elevair	JSCS): color, moist, % by wt , plast. density cementation, react. w/HCl, geo. inter.	v, structure,	PID READING (ppm)	RE	MARKS	
Surface Eleva	tion: 561.34 ft msl (NAVD 88)				•	
~4".aspha	alt ′ GRADED SAND with SILT and GRA\	/EL (SP-SM):	11		red to 2 feet nd surface (bgs)	
1 PSZB dark brov	vn (10YR 4/3), moist, ~65% fine to coa avel, ~10% fines			41 1	-U4-4-6	
60- 1	1401, 1070 miles]-	sidewalls of	ollected from boring	
2-			-			
_PSZB			-	Broken bou	lder clast	
3- 25			-	Drilled to 40	0.5' bgs with 9"	
-			-		hammer bit	
4 ~50% fin	e to coarse sand, ~40% gravel, ~10%	fines	-	Lithology a	ssessed from	
-			-	cuttings col	lected through	
5_PSZB			-	l and dyolome		
5						
6-						
7-				Driller miss	and 7 Elippo	
	Y GRADED GRAVEL with SAND (GP): 2), moist, ~65% gravel, ~35% fine to co			sample col		
fines	2), moist, ~03% graver, ~33% line to cc	iarse sailu, trace	[]			
9-						
10-PSZB-						
60-						
11-						
12-			-			
			-			
13-			-			
			-			
14			11		RMRK3	
/%≥ G	eomatrix Consultants	Pr	oject No. 7190	.005.0	Page 1 of 3	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-60 (cont'd) SAMPLES PID READING DESCRIPTION **REMARKS** NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15-60-16 17-POORLY GRADED SAND with GRAVEL (SP): dark grayish 18 brown (2.5Y 4/2), moist, ~65% fine to coarse sand, ~35% gravel, trace fines 19-PSZB 20-20 21 22-



				and Irwindale, California	Log of Bori	ing M	10. PS 	ZB-60	(cont'd)
(feet)	Sample S No.	Sample		DESCRIPTION NAME (USCS): color, moist, % by wt., plast. de cementation, react. w/HCl, geo. in	ensity, structure, ter.		PID READING (ppm)	F	EMARKS
		<u>"</u>	- "	POORLY GRADED GRAVEL with SAND (0	GP): continued		- IZ		
-				`	•	-			
32-									
				~65% gravel, ~35% fine to coarse sand, tra	ice fines				
33-									
34-									
,,,									
35-	PSZB-		İ						
-	60- 35								
36-									
4									
37-									
4			-	POORLY GRADED SAND with GRAVEL (S	SP): dark gravish				
38-				brown (2.5Y 4/2), moist, ~80% fine to coars	se sand, ~20%	-			
-				gravel, trace fines		-			
39-						-	,		
٦									
40-	PSZB- 60-					-		Boring ba	ckfilled with
	40			Bottom of boring at 40.5 ft bgs		\dashv			chips and sly hydrated
41-								Surface p	atched with
12-								asphalt	
"									
43-									
_									
14-									
4									
15-									
\dashv									
46-									
-			ĺ						
47-									
-									
48	L		1					<u></u>	
				Geomatrix Consultants			No. 7190.0		Page 3 of 3

PROJECT: AZUSA Azusa a	/IRWINDALE S			Log	of Borin	g No. PS	SZB-61			
BORING LOCATION:					ELEVATION AND DATUM: 562.16 ft msl (NAVD 88)					
				562.16 ft m		B) DATE FINIS	· SHED:			
DRILLING CONTRACT	TOR: Layne Chr	istenson, Co.		2/10/06		2/10/06				
DRILLING METHOD:	Dual Wall Air P	ercussion		TOTAL DEPT	H (ft.):	MEASURIN	1			
	Juli Hall All F	OI OUDDIOI E		40.5	FIRST	Ground s				
DRILLING EQUIPMEN	IT: Foremost Dr	ills AP-1000		DEPTH TO WATER LOGGED BY:	FIRST	COMPL.	24 HRS. NA			
SAMPLING METHOD:	Cuttings from	cyclone or as noted in re	marks	K. Zeiler	E PROFESSI	ONIAL	BEC NO			
HAMMER WEIGHT:	NA ,	DROP: NA		G. Rees		ONAL:	REG. NO. 6612			
DEPTH (feet) Sample No. Sample Blows/ 6 inches	NAME (USC	DESCRIPTION (S): color, moist, % by wt , plast cementation, react. w/HCl, get a compart of the c	st. density, structu o. inter.	re,	PID READING (ppm)	RE	MARKS			
Sa Sa Si Si Si Si Si Si Si Si Si Si Si Si Si	Surface Elevation	: 562.16 ft msl (NAVD 88)								
1 - PSZB- 61- 3 - 25 4 6 7 6 8 - 7.5 9 10 11 10 11 12 13 -	(2.5Y 5/2), r fines	RADED GRAVEL with SAN noist, ~60% gravel, ~40% fi	ine to coarse sar			ground sur BC² Enviro 2/9/06 1' and 2.5' collected fr 2/9/06 Drilled to 4 casing and	om sidewalls on 0.5' bgs with 9" hammer bit ssessed from llected through			
		_								
14	<i>20</i> 5—						RMRK3			
	/% Geo	matrix Consultants		Pro	oject No. 7190	.005.0	Page 1 of 3			

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-61 (cont'd) SAMPLES PID READING DESCRIPTION

NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. REMARKS POORLY GRADED GRAVEL with SAND (GP): continued 15 61-15 Difficult drilling to 21' bgs 16 17 ~65% gravel, ~35% fine to coarse sand, trace fines 18-19 61-20 21 22-23 24 25 61-25 26 27-28-29 61-30 31 /X **Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 3

					Log of Borin	-	_		<u> </u>
(feet)	Sample No.	Sample 3	Blows/ M 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. de cementation, react. w/HCl, geo. int	nsity, structure, er.		PID READING (ppm)	RE	MARKS
				POORLY GRADED GRAVEL with SAND (G	SP): continued			·	
2-					_				
٦				~55% gravel, ~45% fine to coarse sand, trad	ce fines	I		Difficult dri	lling
3-									
╡									
4-						$ \exists$			
_									
35	PSZB- 61-								
	35								
6-									
_									
7-									
7				~75% gravel, ~25% fine to coarse sand, tra	ce fines				
88-				V				İ	
┪									
39-						-			
_						-		Large Cob	ble
10-	PSZB 61-					-			ckfilled with
_	40		١.	Bottom of boring at 40.5 ft bgs		77		bentonite	chips and
11 –						-			sly hydrated atched with
_						-		asphalt	
42-						-			
-					•	-			
43-	1					-			
-	-					-			
44-	{					-			
-	1					-			
45-	1					-			
-	1					-			
46-	1					-	1		
-	-					-	1		
47-	$\frac{1}{2}$					-	-		
-						-	1		
48-	<u></u>						<u> </u>		

	VIRWINDALE STUDY AREA and Irwindale, California	Log	of Boring	g No. P	SZB-62
BORING LOCATION			AND DATUM:	0\	
		DATE STAR	nsl (NAVD 88 FED:	DATE FINI	SHED:
DRILLING CONTRAC	CTOR: Layne Christenson, Co.	2/9/06	F11 // \	2/10/06	NG POINT:
DRILLING METHOD:	Dual Wall Air Percussion	TOTAL DEPT	ι Η (π.):	Ground s	
DRILLING EQUIPME	NT: Foremost Drills AP-1000	DEPTH TO WATER	FIRST	COMPL.	24 HRS. NA
SAMPLING METHOL	D: Cuttings from cyclone or as noted in remarks	LOGGED BY		1.5. ** 1	
		K. Zeiler RESPONSIB	LE PROFESSION	ONAL:	REG. NO.
HAMMER WEIGHT:				6612	
DEPTH (feet) Sample No. Sample Blows/ Blows/ Ginches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, strucementation, react. w/HCl, geo. inter.	ucture,	PID READING (ppm)	RI	EMARKS
Sal Sal	Surface Elevation: 563.51 ft msl (NAVD 88)				
	~3" asphalt				to 5 feet below
				BC ² Enviro	rface (bgs) by onmental
1 —PSZB- 62-			17	41 - 10 -	,
- , -	•			1' and 2.5' collected f	samples from sidewalls of
2-			11		d 5' sample with a
PSZB 62-			-	hand auge	er .
3- 2.5			1-1		
4 1		•] -		stopped at 3.5'
4-	POORLY GRADED GRAVEL with SAND (GP): dar			bgs due to	o boulder concrete slab)
4	brown (2.5Y 4/2), moist, ~60% gravel, ~40% fine to sand, trace fines	coarse			
5 PSZB	sand, trace lines				40.5' bgs with 9" d hammer bit
62-					
5			17		assessed from ollected through
6-	•			the cyclor	
1	~70% gravel, ~30% fine to coarse sand, trace fines				
7-	V		-		
PSZB 62-			1-1		
8- 7,5			-		
4 1	·				
9-	~80% gravel, ~20% fine to coarse sand, trace fines]]		
10-PSZB					
62-					
10					
11-					
12-					
	~65% gravel, ~35% fine to coarse sand, trace fines	3	- .		
13-	♦		-		
			-		
14					Pitaperia
	Geomatrix Consultants	P	roject No. 7190	.005 0	Page 1 of 3
L	VOINGUIA VOIIGUIGIIG		,		13

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-62 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION
NAME (USCS): color; moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. REMARKS POORLY GRADED GRAVEL with SAND (GP): continued 15 62-16 17 ~80% gravel, ~20% fine to coarse sand, trace fines 18 19 20 21 22-~70% gravel, ~30% fine to coarse sand, trace fines 23 24 25 62-25 26 27 ~55% gravel, ~45% fine to coarse sand, trace fines 28 29

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Geomatrix Consultants

		, ~	usa e	and Irwindale, California	Log of Bo	ring N	lo. PS	ZB-62	(cont'd)
(feet)	Sample No.	Sample		DESCRIPTION NAME (USCS): color, moist, % by wt., p cementation, react. w/HCl,	last. density, structure,		PID READING (ppm)	F	REMARKS
	S	S	В	POORLY GRADED GRAVEL with SA			<u>~~~~</u>		
_				1 OOKET GRADED GRAVEE WILLI SA	AND (GP): continued				
32-	İ								
-]			~65% gravel, ~35% fine to coarse sa	nd, trace fines				
33-				♥					
_	ĺ								
34-									
_									
35-								•	
-	62- 35								
36-									
_									
37-									
-	-					[]			
38-									
_	{					14			
39-									
_	•								
40-									
-	62- 40			Bottom of boring at 40 5 ft bas		_		Bonng ba bentonite	ckfilled with chips and
41-				Bottom of boring at 40.5 ft bgs] -		continuo	sly hydrated patched with
-								asphalt	Attined With
42-	ĺ								
	}								
43-]								
_									
44-									
-									
45-									
_	1								
46-									
_									
47-									
_	}								
48-									

PROJECT: AZUSA Azusa	VIRWINDALE Sand Irwindale, C		1 -	of Boring	g No. PS	SZB-63
BORING LOCATION:	PerkinElmer			AND DATUM:		-
	· -		DATE STAR	nsl (NAVD 88	B) DATE FINIS	HED:
DRILLING CONTRAC	Layne Chr	istenson, Co.	2/9/06		2/9/06	
DRILLING METHOD:	Dual Wall Air P	ercussion	TOTAL DEPT 40.5		MEASURIN Ground s	urface
DRILLING EQUIPME	NT: Foremost Dr	ills AP-1000	DEPTH TO WATER	FIRST NA	COMPL.	24 HRS. NA
SAMPLING METHOD	: Cuttings from	cyclone or as noted in remarks	LOGGED BY K. Zeiler			•
HAMMER WEIGHT:	NA	DROP: NA	G. Rees	LE PROFESSI	Onal:	REG. NO. 6612
Sample Sample Sample Sample Blows/ 6 inches	NAME (USC	DESCRIPTION CS): color, moist, % by wt., plast. densi cementation, react. w/HCl, geo. inter.	ty, structure,	PID READING (ppm)	RE	MARKS
Sa Sai	Surface Elevation	: 564.45 ft msl (NAVD 88)				
1 — PSZB————————————————————————————————————	(2.5Y 5/2), r fines	RADED GRAVEL with SAND (GP) noist, ~60% gravel, ~40% fine to co	oarse sand, trace		BC² Enviro 1' and 2.5' collected fr boning Drilled to 4 casing and Lithology a	samples om sidewalls of 0.5' bgs with 9" hammer bit ssessed from llected through
11-	~85% grav	el, ~15% fine to coarse sand, trace	fines			
	∕⁄⁄∕ Geo	matrix Canada ta	Τ_		205.0	RMRK3
l .	·/ Geo	matrix Consultants	I Pi	roject No. 7190.	.005.0	Page 1 of 3

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-63 (cont'd) SAMPLES PID READING DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued PSZB 15-63-15 16 17 18 19-20 20 21 22-23 24 25 Granitic cobbles 63-26 27 ~65% gravel, ~35% fine to coarse sand, trace fines 28 29 PSZB 63-RMRK

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Geomatrix Consultants

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-63 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 32 33-Difficult drilling 34 35 63-35 36 37 ~75% gravel, ~25% fine to coarse sand, trace fines 38-39-Granitic cobbles 40 63-Boring backfilled with 40 Bottom of boring at 40.5 ft bgs bentonite chips and 41 continuously hydrated Surface patched with asphalt 42-43-44 45-46-48 RMRK3 **Geomatrix Consultants**

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	/IRWINDALE STUDY AREA and Irwindale, California	Log	of Borin	g No. P	SZB-64
BORING LOCATION:	-		AND DATUM:		
		DATE START	nsl (NAVD 8	DATE FINI	SHED:
ORILLING CONTRACT	ron: Layne Christenson, Co.	2/8/06		2/9/06	Oneb.
DRILLING METHOD:	Dual Wall Air Percussion	TOTAL DEPT	ΓΗ (ft.):	MEASURII	
		40.5 DEPTH TO	FIRST	Ground :	24 HRS.
DRILLING EQUIPMEN	IT: Foremost Drills AP-1000	WATER	NA	NA	NA
SAMPLING METHOD:	Cuttings from cyclone or as noted in remarks	LOGGED BY K. Zeiler	':		
LAAMAED WEIGHT.	NA DOOR NA	RESPONSIB	LE PROFESS	IONAL:	REG. NO.
	NA DROP: NA	G. Rees	7 1	, -	6612
DEPTH (feet) Sample No. Sample Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, streact. w/HCl, geo. inter.	ructure,	PID READING	RI	EMARKS
Sa Sa	Surface Elevation: 566.21 ft msl (NAVD 88)	-	82		
	~3" asphalt		-		to 5 feet below
7			17	ground su BC ² Enviro	rface (bgs) by
1 — PSZB-			-	Large cob	bles in air knife
- 1			14	cuttings	
2-				1' and 2.5'	samples
_PSZB					rom sidewalls I 5' sample witl
3 - 2.5				hand auge	
3 - 2.5]		40.514 '11.6
4-					40.5' bgs with 9 d hammer bit
_				Lithology	assessed from
5_P\$ZB	·			cuttings co	ollected through
64-				the cyclon	е
- 5					
6-		•	14	1	
-	POORLY GRADED GRAVEL with SAND (GP): da	ark grayish	1-		•
7-	brown (2.5Y 4/2), moist, ~80% gravel, ~20% fine to sand, trace fines	o coarse			
_PSZB	Sand, trace times				
64-				Small cob	hloo
8 75				Small cod	יטוכס
			-		
9-	~60% gravel, ~40% fine to coarse sand, trace fines	S	-		
- .	₩				
10 PSZB-					•
64-					
10			17		
11-					
			-		
12-					
			. 🔟	-	
42	POORLY GRADED SAND with GRAVEL (SP): gr				
13-	(2.5Y 5/2), moist, ~75% fine to coarse sand, ~25% fines	gravei, trace			
14			_		RMR
				_	

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-64 (cont'd) SAMPLES PID READING **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued 15-64-15 16 17 dark grayish brown (10YR 4/2), ~85% fine to coarse sand, ~15% gravel, trace fines 18 19 20 21 22-

~65% fine to coarse sand, ~35% gravel, trace fines

POORLY GRADED GRAVEL with SAND (GP): dark grayish

brown (10YR 4/2), moist, ~70% gravel, ~30% fine to coarse

RMRK

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sand, trace fines

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23

24

25

26

27

28

29

64-

64-25 PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-64 (cont'd) SAMPLES PID READING (ppm) Sample **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 32 ~60% gravel, ~40% fine to coarse sand, trace fines 33 34 35 64-35 36 37 ~75% gravel, ~25% fine to coarse sand, trace fines 38 39 64-Boring backfilled with bentonite chips and Bottom of boring at 40.5 ft bgs continuously hydrated 41 Surface patched with asphalt 42-43 44 45-46

RMRK3

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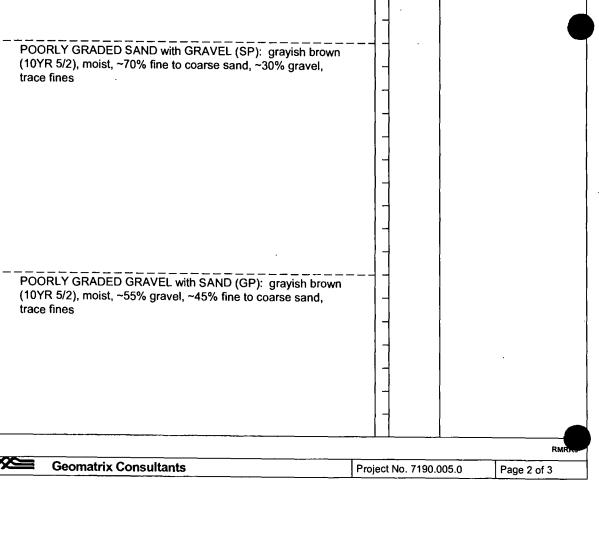
48

ROJECT:			IRWINDALE S and Irwindale, C		Log	g of	Boring	g No. P	SZB-65
ORING LO			PerkinElmer		ELEVATIO			D)	
	2017			·	567.15 ft DATE STA			DATE FINIS	SHED:
KILLING (JUNI	RACI	OR: Layne Ch	isienson, Co.	2/17/06			2/17/06	
RILLING I	METH	IOD:	Dual Wall Air F	ercussion error	TOTAL DE 40.5	PTH (rt.):	MEASURIN Ground s	
RILLING			T: Foremost Dr	ille AP-1000	DEPTH TO	1	FIRST	COMPL.	24 HRS.
				-	WATER LOGGED		NA	NA	NA
AMPLING	MET	HOD:	Cuttings from	cyclone or as noted in remarks	K. Zeiler				
IAMMER V	VEIG	HT:	NA	DROP: NA	RESPONS G. Rees	IBLE I	PROFESSI	ONAL:	REG. NO. 6612
-	AMPL 8	Blows/ M 6 inches	NAME (US	DESCRIPTION CS): color, moist, % by wt., plast, dens cementation, react, w/HCl, geo, inter.	ity, structure,		PID READING (ppm)	RE	MARKS
(feet) Sample	Sample	e Big	Surface Elevation	: 567.15 ft msl (NAVD 88)		-	REA (p		
			~3" asphalt			\perp			o 5 feet below
1 - PSZE 65- - 1 2 - PSZE 65- 3 - 25 65- 5 65- 5 65- 5 65- 5 65- 5 65- 5 65- 5 65- 5 10 - PSZE 65- 10 - PSZE 65- 10 - PSZE 65- 11 - PSZE 65- 1	B		(2.5Y 5/2), fines	RADED GRAVEL with SAND (GF moist, ~85% gravel, ~15% fine to d	coarse sand, trace	-		boring and hand auge Drilled to 4 casing and	rom sidewalls of 5' sample with r on 2/14/06 0.5' bgs with 9 I hammer bit assessed from bilected through
12-				el, ~20% fine to coarse sand, trace	e fines				
14		1	1	*			J	1	RMR
			Geo	matrix Consultants		Projec	ct No. 7190	.005.0	Page 1 of 3

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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-65 (cont'd) SAMPLES PID READING **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 65-16 17 ~55% gravel, ~45% fine to coarse sand, trace fines 18 19 20 65-20 21 22 POORLY GRADED SAND with GRAVEL (SP): grayish brown 23 (10YR 5/2), moist, ~70% fine to coarse sand, ~30% gravel, trace fines 24 25 65-25 26 27 POORLY GRADED GRAVEL with SAND (GP): grayish brown 28 (10YR 5/2), moist, ~55% gravel, ~45% fine to coarse sand,



29

30

31

65-30

	_			and Irwindale, California	ring No. PSZB-65 (cont'				
(feet)	Sample No.	Sample 3	Blows/ m 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. cementation, react. w/HCl, geo.	density, structure, inter.	PID READING (ppm)	REMARKS		
32-				POORLY GRADED GRAVEL with SAND	(GP): continued		Difficult drilling Freshly broken graniti clasts in cuttings		
_				~65% gravel, ~35% fine to coarse sand, t	race fines -		J		
33- -				♥	-				
34-					-				
35-	PSZB- 65-				-		Broken large andesition cobble in cuttings		
36-	35				-		- 2000 in outilitys		
37-					-				
- 38-				POORLY GRADED SAND (SP): grayish moist, ~90% fine to coarse sand, ~10% grayish	brown (10YR 5/2), ravel, trace fines				
- 39					-				
- 40-	PSZB- 65-				-				
41-	40		-	Bottom of boring at 40.5 ft bgs			Boring backfilled with bentonite chips and continuously hydrated Surface patched with		
- 42-	l				-		asphalt		
43-	İ				-	ļ			
44-					-				
45 -	i				-				
٦					-				
46 – –					-				
47 – _					-				
ل_48									

	/IRWINDALE STUDY AREA and Irwindale, California	Log	g of Borin	g No. P	SZB-66
BORING LOCATION:	PerkinElmer		N AND DATUM: msl (NAVD 8		
DRILLING CONTRACT	TOR: Layne Christenson, Co.	DATE STA 2/13/06	RTED:	DATE FINI 2/13/06	
DRILLING METHOD:	Dual Wall Air Percussion	TOTAL DE 40.5		Ground s	surface
DRILLING EQUIPMEN	IT: Foremost Drills AP-1000	DEPTH TO WATER	NA	COMPL.	24 HRS. NA
SAMPLING METHOD:	Cuttings from cyclone or as noted in remarks	K. Zeiler		IONAL -	DEC NO
HAMMER WEIGHT:		G. Rees		IONAL;	REG. NO. 6612
DEPTH (feet) Sample No. Sample Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast, density, str cementation, react, w/HCl, geo, inter.	ructure,	PID	RE	EMARKS
- 10 10 10 10 10 10 10 10 10 10 10 10 10	Surface Elevation: 569.20 ft msl (NAVD 88) ~4" asphalt	 -	Ψ α	Air knifed	to 5 feet below
1 — PSZB- 66- 1				ground sur BC ² Environ 2/8/06	rface (bgs) by onmental on
3- 25				casing and	40.5' bgs with 9" d hammer bit assessed from
5- 6-PSZB-	POORLY GRADED GRAVEL with SAND (GP): da brown (2.5Y 4/2), moist, ~55% gravel, ~45% fine to sand, trace fines				ollected through
7- 	POORLY GRADED GRAVEL (GP): grayish brown moist, ~100% fine to coarse gravel, trace fine sand		- - - -	Difficult dr	tilling
9- 10-PSZB- 66-	POORLY GRADED GRAVEL with SAND (GP): gravel, ~40% fine to coarse fines				
11-			- - - - - - - - - -		
13-	POORLY GRADED SAND with GRAVEL (SP): gra (2.5Y 5/2), moist, ~60% fine to coarse sand, ~40% fines				
14					RMRK
	Geomatrix Consultants		Project No. 7196	0.005.0	Page 1 of 3

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-66 (cont'd) SAMPLES PID READING DESCRIPTION REMARKS . NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, react, w/HCl, geo, inter. POORLY GRADED SAND with GRAVEL (SP): continued 15 66-16 17-~55% fine to coarse sand, ~45% gravel, trace fines 18-Difficult drilling 19-20 20 21 Fuel pump on hammer broke down and replaced 22-POORLY GRADED GRAVEL with SAND (GP): grayish brown 23 (2.5Y 5/2), moist, ~65% gravel, ~35% fine to coarse sand, trace fines 24 25 66-25 26 27 POORLY GRADED SAND with GRAVEL (SP): grayish brown 28 (2.5Y 5/2), moist, ~70% fine to coarse sand, ~30% gravel, trace fines 29 66-**Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 3

Ceet) Sample No. Sample Sample				f Boring No. PSZB-66 (cont'd					Log of Boring No. PSZB-66 (cont'd					
	Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. densi cementation, react. w/HCl, geo. inter.	ity, structure,		PID READING (ppm)	F	EMARKS							
7 1 1		POORLY GRADED SAND with GRAVEL (SP)): continued											
32-		·												
33-		POORLY GRADED GRAVEL with SAND (GP) (2.5Y 5/2), moist, ~75% gravel, ~25% fine to cofines): grayish brown oarse sand, trace											
34-		ines												
35 PSZB 66-														
36														
37-														
38-		POORLY GRADED GRAVEL (GP): grayish be moist, ~95% gravel, ~5% fine to coarse sand,	rown (2.5Y 5/2), trace fines											
39-														
40 PSZB 66-						Cobbles								
41 - 40		Bottom of boring at 40.5 ft bgs				bentonite continuou Surface p	ckfilled with chips and sly hydrated atched with							
42-					-	asphalt								
43-														
44-														
45														
46														
47-														
48		·					RN							

	/IRWINDALE STUDY AREA and Irwindale, California	Log	of Borin	g No. PSZB-67
BORING LOCATION:	PerkinElmer	570.00 ft m	AND DATUM: ISI (NAVD 8	3)
DRILLING CONTRACT	TOR: Layne Christenson, Co.	DATE START 2/13/06		DATE FINISHED: 2/13/06
DRILLING METHOD:	Dual Wall Air Percussion	TOTAL DEPT	H (ft.):	MEASURING POINT: Ground surface
DRILLING EQUIPMEN	T: Foremost Drills AP-1000	DEPTH TO WATER	FIRST	COMPL. 24 HRS.
SAMPLING METHOD	Cuttings from cyclone or as noted in remarks	LOGGED BY:		
HAMMER WEIGHT:	NA DROP: NA		LE PROFESSI	ONAL: REG. NO. 6612
DEPTH (feet) Sample Sample Sample Blows/ Sample Ginches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure cementation, react. w/HCl, geo. inter.		PID READING (ppm)	REMARKS
Sar Sar Sar Sar Sar Sar Sar Sar Sar Sar	Surface Elevation: 570.00 ft msl (NAVD 88)		RE	
1 _PSZB- 67-	~3" asphalt			Air knifed to 5 feet below ground surface (bgs) by BC² Environmental on 2/8/06 1' and 2.5' samples
2 - PSZB 67- 3 - 2.5				collected from sidewalls of boring and 5.5' sample with a hand auger on 2/8/06 Drilled to 40.5' bgs with 9"
4-	,			casing and hammer bit Lithology assessed from cuttings collected through the cyclone
67- 6- 55	POORLY GRADED SAND with GRAVEL (SP): brow (10YR 5/3), moist, ~60% fine to coarse sand, ~40% trace fines			-
PSZB- 67- 7-5				
9- - 10-PSZB- 67-	~55% fine to coarse sand, ~45% gravel, trace fines			
11-				
12-				Difficult drilling
13-	POORLY GRADED GRAVEL with SAND (GP): gray (10YR 5/2), moist, ~70% gravel, ~30% fine to coarse trace fines			
14				RMRK3
·	Geomatrix Consultants	Pr	oject No. 7190	005.0 Page 1 of 3

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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-67 (cont'd) SAMPLES PID READING Sample Blows/ 6 inches **DESCRIPTION** REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 67-16-17 brown (10YR 5/3), ~55% gravel, ~45% fine to coarse sand, trace fines 18 19 20-67-20 21 Difficult drilling . 22 ~80% gravel, ~20% fine to coarse sand, trace fines 23 24 25 Cobbles 67-25 26 27-~55% gravel, ~45% fine to coarse sand, trace fines 28-29-30-67-30 31 **Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 3

		Az	usa a	/IRWINDALE STUDY AREA and Irwindale, California	Log of Boring	No. PS	ZB-67 (cont'd)
<u>. </u>		MPL			1	O	
(feet)	sample No.	Sample	Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast cementation, react. w/HCl, geo	. density, structure, . inter.	PID READING (ppm)	REMARKS
				POORLY GRADED GRAVEL with SAND	(GP): continued		
32-						7	
³²]						1	
33-						1	
~~							
34-							
4							
35-						4	
1	67- 35					-	
36-						-	
4						-	
37-						1	
_ +				grayish brown (2.5Y 5/2), ~80% gravel, ~	20% fine to coarse	1	
38-				Sand, trace lines		1	
39-						1	
387						1	
40-	SZB						Cobbles
	67- 40						Boring backfilled with
41-				Bottom of boring at 40.5 ft bgs			bentonite chips and continuously hydrated
4					1.	4	Surface patched with asphalt
42-						4	•
+].	-	
43-						-	
4						4	
44-						1	
						1	
45-						1	
46						1	
40]						1	
47-]	
]							
48							
							1

		IRWINDALE STUDY AREA nd Irwindale, California		Log of Boring No. PSZB-						
		PerkinElmer		ELEVATION						
				569.15 ft n			B) DATE FINI	SHED		
ORILLING CO	NTRACT	OR Layne Christenson, Co.		3/6/06			3/6/06			
DRILLING ME	THOD.	Dual Wall Air Percussion		TOTAL DEPT	ΓH (fl	t):	MEASURII			
			•	40.5		TIDOT.	Ground s			
DRILLING EQ	UIPMEN	T Foremost Drills AP-1000	,	DEPTH TO WATER		FIRST NA	NA	24 HRS NA		
		Cuttings from suctions as as		LOGGED BY		1/1	INA			
SAMPLING M		Cuttings from cyclone or as	noted in remarks	P. Jeffers						
HAMMER WE	IGHT [.]	NA DROP NA	.	RESPONSIB G. Rees	LE P	ROFESSI	ONAL:	REG. NO. 6612		
SAM	PLES	DESC	CRIPTION	10. Nees	1 1	()		1 0012		
Ceet) Sample No.	Sample Blows/ 6 inches	NAME (USCS): color, moist,	% by wt., plast_density, sta act_w/HCl, geo. inter	ructure,		PID READING (PPM)	RI	EMARKS		
Sal	B B F	Surface Elevation: 569.15 ft msl	(NAVD 88)		1	RE (
		~3" asphalt			\Box			o 5 feet below		
-					II			face (bgs) by		
1 - PSZB-						_	2/22/06	onmental on		
68-		,				- '	_,,			
1							1' and 2.5'			
2-								rom sidewalls o		
PSZB-					-			l 5' sample with er on 2/22/06		
3- 25										
3 23							Drilled to 4	10.5' bgs with 9'		
` -								hammer bit		
4-			•		14					
								assessed from		
71								ollected through		
5 PSZB 68-					-		the cyclon	е		
- 5										
6-										
	1 1	5005111 651555 6511								
7 1		POORLY GRADED GRAVI brown (10YR 7/3), moist, ~								
7-		sand	05 /6 graver, -15 /6 little	to coarse	-		!			
_PSZB										
68-										
8- 75					-					
4										
9-					_					
~										
7]					-					
10-PSZB-					-		,			
68-					_]				
10										
11-	-				-	}				
4					-	-				
12-										
147					-]				
		POORLY GRADED SAND	with GRAVEL (SP): br		-	-				
13-		(7.5YR 7/4), moist, ~85% f			_	1				
		, ,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		J						
⊣ '	ł				-	1				
14						<u> </u>	J	RMRH		

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-68 (cont'd) SAMPLES PID READING DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued 15 68-16 17-~75% fine to coarse sand, ~25% gravel 18 19 20 21 22 ~80% fine to coarse sand, ~20% gravel 23 24 25 68-26 27 ~85% fine to coarse sand, ~15% gravel 28 29 68-**Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 3

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-68 (cont'd) SAMPLES PID READING (ppm) Blows/ 6 inches DESCRIPTION **REMARKS** NAME (USCS): color, moist, % by wt., plast, density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED SAND with GRAVEL (SP): continued 32 33 34 35 36 37 38 39 PSZB 68-Boring backfilled with bentonite chips and Bottom of boring at 40.5 ft bgs continuously hydrated 41 Surface patched with asphalt 42-43 44 45 46 47 48

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		IRWINDALE STUDY AREA and Irwindale, California	Log	of	Boring	g No. P	SZB-69
BORING LOCAT	ION:	PerkinElmer	ELEVATION			o,	
			568.38 ft m			8) DATE FINI	SHED:
DRILLING CONT	RACT	ron: Layne Christenson, Co.	3/6/06			3/6/06	
ORILLING METH	IOD:	Dual Wall Air Percussion	TOTAL DEPT	ΓH (1	ft.):		NG POINT:
			40.5 DEPTH TO	7	FIRST	Ground s	24 HRS.
DRILLING EQUI	PMEN	T: Foremost Drills AP-1000	WATER	- 1	NA	NA	NA
SAMPLING MET	HOD:	Cuttings from cyclone or as noted in remarks	LOGGED BY	:			•
			P. Jeffers RESPONSIB	I F I	PROFESSION	ONAL:	REG. NO.
HAMMER WEIG	HT:	NA DROP: NA	G. Rees	1	NOI LOOK	OITAL.	6612
SAMPL 문술 🎍 🌚		DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density	y, structure,		PID READING (ppm)	RI	EMARKS
Cfeet) (feet) Sample No.	Blows/ 6 inches	cementation, react. w/HCl, geo. inter.		1	PIC (Ppr		
S S S	8 6	Surface Elevation: 568.38 ft msl (NAVD 88)			~~~		
	}	~3" asphalt		┨			to 5 feet below
7 1				-	[groung su BC² Envira	rface (bgs) by onmental on
1 - PSZB	i	-		-	1	2/22/06	
- 1 og-				-		41 0 5	
2-				_	Ì	1' and 2.5' collected f	samples rom sidewalls o
_PSZB					ļ	boring and	f 5' sample with
69-				-	1	hand auge	er on 2/22/06
3- 25				-	1		
				-		Drilled to	40.5' bgs with 9' d hammer bit
4-				١.]	casing and	u nammer bit
7	ľ				Ì	Lithology:	assessed from
- 1 1 1	ł			-	1		ollected through
5_PSZB				-	-	the cyclon	e
69-				-			
6-				-			
7		POORLY GRADED GRAVEL with SAND (GP):		-	1		
7-	.	(Gley 1 7/N), dry, ~85% gravel, ~15% fine to co	arse sand, trace	-	-		
_PSZB				١.]		
69-							
8 75	,			-	1		•
- '				-	1		
9-		moist, ~80% gravel, ~20% fine to coarse sand		-	4		
		V					
		Ţ,					
10 PSZB-	1			-	1		
10	1			-	-		
11-				.	_	1	
					1	1	
7	-			-	1		
12-				-	1		
4		~85% gravel, ~15% fine to coarse sand		.	-		
13-		1 ₩			_]		
137		<u> </u>					
					7		
14	<u></u>	<u> </u>		L		J	RMR
		Geomatrix Consultants	Pi	roie	t No. 7190	.005.0	Page 1 of 3
		Ocomula Consultants		٠٫٠١			1. 490 . 0. 0

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PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-69 (cont'd) SAMPLES PID READING DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 69-16 17-18 19-20 69-20 21 22 ~75% gravel, ~25% fine to coarse sand 23 24 25 69-25 26 27 28 29 30 30 **Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 3

	PROJE	CT:			VIRWINDALE STUDY AREA and Irwindale, California	Log of Bo	ring	No. PS	SZB-69	(cont'd)
\bigcirc	DEPTH (feet)	Sample No.	Sample W	Blows/ Elons/ Ginches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. of cementation, react. w/HCl, geo. i	density, structure, inter.	,	PID READING (nnm)	F	REMARKS
i					POORLY GRADED GRAVEL with SAND	(GP): continued				· -
	32-			!			-			
	_				~80% gravel, ~20% fine to coarse sand		-	1		
	33-			. .	V					
	-		l	}						
	34-									
	-			,			[-			
	35-	PSZB- 69-					-	-		
	-	35					-	-		
	36-						-	1		
·	27						-	1		
	37-						-	1		
	38-						-		li .	
			1				}]]		
	39-		:						}	
. •	-						_]		
1	40-	PSZB- 69-	_				-		Poring her	ماداناه ما دخله
I	-	40			Bottom of boring at 40.5 ft bgs		-	-	bentonite	ckfilled with chips and
!	41-			}			-	1	Surface p	usly hydrated patched with
	_						-	1	asphalt	
	42-						[-			
	43-			·			-	1		
	437		<u>'</u>				-	1		
	44-						-]		
	-			·]	l .	
	45-						-	1		
	-						-	}		
	46-]			-	{	}	
	_						-	1		
	47-] 			-	-		
\bigcirc	40						-	1	}	
\bigcirc	48-							I	I	RMRK3
	L				Geomatrix Consultants		Projec	t No. 7190.	005.0	Page 3 of 3

	A/IRWINDALE STUDY AREA and Irwindale, California	Log	of Boring	g No. PS	SZB-70		
BORING LOCATION	: PerkinElmer		AND DATUM: nsl (NAVD 8	8)			
ORILLING CONTRA	CTOR: Layne Christenson, Co.		DATE STARTED: DATE FINISHED:				
DRILLING METHOD	: Dual Wall Air Percussion	TOTAL DEP	TH (ft.):	MEASURIN			
	ENT: Foremost Drills AP-1000	40.5 DEPTH TO	FIRST				
		WATER LOGGED BY	<u> </u>	NA	NA		
	D. Cuttings from cyclone	A. Gonzal	ez BLE PROFESSI	ONAL ·	REG. NO.		
HAMMER WEIGHT:		G. Rees			6612		
(feet) Sample No. Sample Blows/ Blows/ Sinches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. dec cementation, react w/HCl, geo. inte	nsity, structure, er.	PID READING (ppm)	RE	MARKS		
Sai Sai	Surface Elevation: 568 09 ft msl (NAVD 88)		RE				
1 - PSZB - 70- 1 2 - PSZB - 70- 3 - 25 5 6 70- 5 - PSZB - 70- 5 - PSZB - 70- 70- 10 - PSZB - 70- 10 - PSZB - 70- 10 - 11 10	brown (2.5Y 5/3), moist, ~60% fine to coarse to coarse sand grayish brown (2.5Y 5/2), ~80% fine to coarse fine to coarse sand ~85% fine to coarse gravel, ~15% fine to c	se gravel, ~20%		casing and	0.5' bgs with 9' hammer bit ssessed from llected through		
13-	dark grayish brown (2.5Y 4/2)						
14	A75				RMR		
	Geomatrix Consultants	P	roject No. 7190	.005.0	Page 1 of 3		

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-70 (cont'd) SAMPLES PID READING (ppm) DESCRIPTION REMARKS NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. POORLY GRADED GRAVEL with SAND (GP): continued 15 70-15 16 17light olive brown (2.5Y 5/3) 18 19 20 21 22light yellowish brown (2.5Y 6/3), ~80% fine to coarse gravel, ~20% fine to coarse sand 23 24 25 PSZB 70-25 26 27 light gray (2.5 7/1), ~85% fine to coarse gravel, ~15% fine to coarse sand 28 29 70-30 RMRK **Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 3

	ANADI	EC 1					ZB-70 (cont'd)
(feet)	Sample Sample	Blows/ R	DESCRIPTION NAME (USCS): color, moist, % by wt., pla cementation, react. w/HCl, g	ast. density, structure, leo. inter.		PID READING (ppm)	REMARKS
			POORLY GRADED GRAVEL with SA	ND (GP): continued			
32-					-		
33-			POORLY GRADED SAND with GRAV brown (2.5Y 5/3), moist, ~70% fine to gravel, trace fines	/EL (SP): light olive coarse sand, ~30%			
34-					17		
<u></u>						,	
35-PSZ	B		•				
70-	- -						
35							
36-					14	1	
27							
37-							
	1		light yellowish brown (2.5Y 6/3)				
38-			V		-		
1					14		'
39-					-		
-					-		
40 PSZ							Boring backfilled with
40	- 1 - 1		Bottom of boring at 40.5 ft bgs	 			bentonite chips and
41-			Dottom of Borning at 10.0 1t bgs				continuously hydrated Surface patched with
4							asphalt
42-							
4							
43-							
4							
44-							
							}
45-							•
.]							
16							
46-							
47-					-	ļ	
48						ļ	
TU							

ROJECT [.]		VIRWINDALE STUDY AREA and Irwindale, California	Log	of Borin	g No. PSZB-71		
ORINGIO		Northrop Grumman		AND DATUM:			
		- Holding Ordinalian	560.66 ft m	nsi (NAVD 8	8) DATE FINISHED.		
RILLING	ONTRA	CTOR: BC ² Environmental	3/6/06				
DILLING N	METHAD	Air Knife	TOTAL DEPT	OTAL DEPTH (ft.): MEASURING POINT:			
TALLING N		UI IIIIC	5.5	1 5/50=	Ground surface		
RILLING E	QUIPME	NT: NA	DEPTH TO WATER	FIRST NA	COMPL. 24 HRS NA NA		
AND BO	METUO). Hand augus and grab someter	LOGGED BY		1147		
AMPLING	METHOL	D. Hand auger and grab samples	P. Jeffers				
AMMER V	ÆIGHT.	NA DROP: NA	G. Rees	LE PROFESSI	ONAL: REG. NO 6612		
SA	MPLES	DESCRIPTION		ပ္			
(feet) Sample No.	Sample Blows/ 6 inches	NAME (USCS). color, moist, % by wt., plast do	ensity, structure, ter.	PID READING (ppm)	REMARKS		
Sa	Sa Bir			88			
		~3" asphalt POORLY GRADED GRAVEL with SAND (0	SD): brown	-			
		(7.5YR 5/4), moist, ~85% gravel, ~15% fine					
1 - PSZB-							
- 1				-	1' and 2.5' samples		
2-		· ·		-	collected from sidewalls of		
_PSZB-					boring and 5' sample with		
71-					hand auger		
3 2.5				17			
+							
4-				-			
5_PSZB							
5_PSZ8					Boring backfilled with		
- 5		Bottom of boring at 5.5 ft bgs	······································	11	native material Surface patched with		
6-				1-	asphalt		
4				1-	-		
7-							
′]							
1				17			
8-				14			
4				14			
9-							
					!		
-							
10-				1-1			
4							
11-							
'']							
1							
12-				1-			
1							
40							
13-				17			
				1+			
i	1 1			1 1	I		
14					RMR		

	VIRWINDALE STUDY AREA and Irwindale, California		of Borin	g No. P	SZB-72		
BORING LOCATION:	Northrop Grumman	į.					
DRILLING CONTRAC	TOR: Layne Christenson, Co.	DATE START 3/7/06					
DRILLING METHOD:	Dual Wall Air Percussion	TOTAL DEPT 40.5	TOTAL DEPTH (ft.) MEASURING POINT 40.5 Ground surface				
DRILLING EQUIPME	NT: Foremost Drills AP-1000	DEPTH TO WATER	FIRST	COMPL NA	24 HRS NA		
SAMPLING METHOD	Cuttings from cyclone	LOGGED BY:	į NA	INA	INA		
HAMMER WEIGHT	NA DROP: NA		E PROFESSIO	ONAL:	REG NO. 6612		
Ceet) Sample No. Sample Sample Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. de cementation, react: w/HCl, geo into	nsity, structure,	PID READING (ppm)	RE	MARKS		
Sar Sar 6	Surface Elevation: 561.94 ft msl (NAVD 88) ~3" asphalt		R.		o 5 feet below		
1 — PSZB — 72- 1 2 — PSZB — 72- 3 — 2.5 — 5 — 6 — 72- 5 — PSZB — 72- 72- 72- 73- 74- 10 — PSZB — 72- 10 — 11 — 12 — 12 — 10	POORLY GRADED GRAVEL with SAND (G (7.5YR 5/4), moist, ~85% gravel, ~15% fine ~80% gravel, ~20% fine to coarse sand	to coarse sand		BC² Enviro 3/6/06 1' and 2.5' collected fr boring and hand auge Drilled to 4 casing and	om sidewalls of 5' sample with ron 3/6/06' 0.5' bgs with 9" I hammer bit assessed from allected through		
14							
14	Geomatrix Consultants	,			RMR Page 1 of 3		

PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Boring No. PSZB-72 (cont'd) SAMPLES PID READING DESCRIPTION
NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. REMARKS POORLY GRADED SAND with GRAVEL (SP): continued 15-16 17 POORLY GRADED GRAVEL with SAND (GP): light gray (Gley 7/N), moist, ~75% gravel, ~25% fine to coarse sand 18 19 20 72-20 21 22. POORLY GRADED SAND with GRAVEL (SP): brown 23 (7.5YR 5/4), moist, ~85% fine to coarse sand, ~15% gravel 24 25 72-26 27 ~80% fine to coarse sand, ~20% gravel 28 29 30 72-30 **Geomatrix Consultants** Project No. 7190.005.0 Page 2 of 3

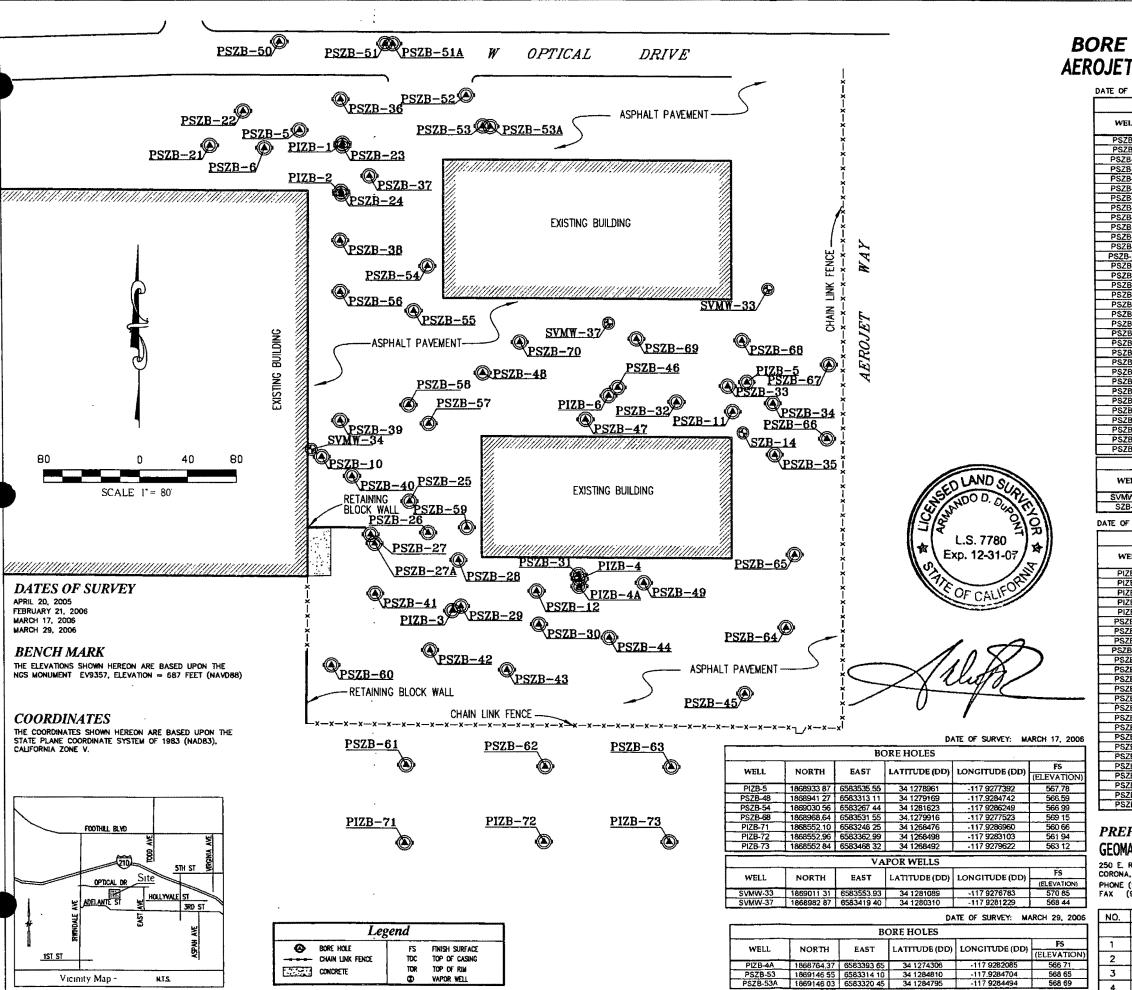
PROJECT: AZUSA/IRWINDALE STUDY AREA Azusa and Irwindale, California Log of Bor								SZB-72 (con	t'd)	
(feet)	Sample No.		Blows/ G 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast, of cementation, react, w/HCl, geo. i	ist. density, structure, eo. inter			REMARKS		
				POORLY GRADED SAND with GRAVEL (SP): continued					
32-						-				
3Z _				-709/ fing to compare and 200/						
33-				~70% fine to coarse sand, ~30% gravel						
JJ _				•						
34-										
									•	
35-					•					
-	72- 35									
36-										
-										
37 -						-				
-			ŀ	7 ~80% fine to coarse sand, ~20% gravel						
38-				•	•	-				
						-	^			
39-										
10-	PSZB-									
	72-							Boring backfilled w	ith	
11-	40			Bottom of boring at 40.5 ft bgs			·	bentonite chips and continuously hydra	ted	
	,							Surface patched will asphalt	ith	
12-										
4										
13-										
_										
14-						-				
-					•	-				
15-			j							
+						-				
46						-				
						-	,			
47-										
40										
48-4									RMI	
			1.	Geomatrix Consultants	Į F	Project	No. 7190 (005.0 Page 3 o	f 3	

BORING LOCATION: Northrop Grumman DRILLING CONTRACTOR: BC ² Environmental DRILLING METHOD: Air Knife DRILLING EQUIPMENT NA SAMPLING METHOD: Hand auger and grab samples PROPRENTATION OF THE PROPRENT NA REPORT NA DROPP NA REPORT NA DROPP NA REPORT NA DROPP NA REPORT NA DROPP NA REPORT NA DROPP NA REPORT NA DROPP NA REPORT NA DROPP NA REPORT NA DROPP NA REPORT NA DROPP NA REPORT NA DROPP NA DROPP NA REPORT NA DROPP NA REPORT NA DROPP NA REPORT NA DROPP	3.12 ft ms TE STARTE 6/06 TTAL DEPTH 5 EPTH TO ATER 10GGED BY Jeffers ESPONSIBL Rees		DATE FINIS 3/6/06 MEASURING Ground SI COMPL. NA ONAL. REI	G POINT: urface
PRILLING CONTRACTOR: BC² Environmental DRILLING METHOD: Air Knife DRILLING METHOD: Hand auger and grab samples PHAMMER WEIGHT. NA DROP NA RI SAMPLES B SAMPLES SUrface Elevation. 563.12 ft msl (NAVD 88) -3" asphalt POORLY GRADED GRAVEL with SAND (GP). brown (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand (7.5YR 5/4), moist, ~15% fine to coarse sand (7.5YR 5/4), moist, ~15% fine to coarse sand (7.5YR 5/4), moist, ~15% fine to coarse sand (7.5YR 5/4), moist, ~15% fine to coarse sand (7.5YR 5/4), moist, ~15% fine to coarse sand (7.5YR 5/4), moist, ~15% fine to coarse sand (7.5YR 5/4), moist, ~15% fine to coarse sand (7.5	ATE STARTE 6/06 DTAL DEPTH 5 PTH TO ATER GGED BY Jeffers SPONSIBL Rees	ED:	DATE FINIS 3/6/06 MEASURING Ground SI COMPL. NA ONAL. 1' and 2.5' s collected fro boring and	G POINT: urface
DRILLING METHOD: Air Knife DRILLING EQUIPMENT NA SAMPLING METHOD: Hand auger and grab samples HAMMER WEIGHT. NA DESCRIPTION NAME (USCS): color, moist, % by wt., plast density, structure, cementation, react w/HCl, geo. inter. Surface Elevation. 563.12 ft msl (NAVD 88) -3" asphale PORLY GRADED GRAVEL with SAND (GP). brown (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand (7.5YR 5/4). Bottom of boring at 5.5 ft bgs	PTAL DEPTH 5 PTH TO ATER GGED BY Jeffers SPONSIBL Rees	FIRST NA PROFESSI	MEASURING Ground SI COMPL. NA ONAL. 1' and 2.5' s collected fro boring and	urface 24 HRS. NA REG. NO. 6612 MARKS samples om sidewalls of 5' sample with a
SAMPLING METHOD: Hand auger and grab samples HAMMER WEIGHT. NA DESCRIPTION NAME (USCS): color, moist, % by wt. plast density, structure, cementation, react w/HCl, geo. inter. Surface Elevation. 563.12 ft ms (NAVD 88) -3" asphalt POORLY GRADED GRAVEL with SAND (GP). brown (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand (7.5YR 5/4). Bottom of boring at 5.5 ft bgs	5 PTH TO ATER GGED BY Jeffers SPONSIBL Rees	FIRST NA PROFESSI	COMPL. NA ONAL. 1' and 2.5' s collected froboring and	urface 24 HRS. NA REG. NO. 6612 MARKS samples om sidewalls of 5' sample with a
SAMPLING METHOD: Hand auger and grab samples HAMMER WEIGHT. NA BORD NA BE SAMPLES SE STATE TO BE STATE TO BE SAMPLES. Surface Elevation. 563.12 ft msl (NAVD 88) -3" asphalt POORLY GRADED GRAVEL with SAND (GP). brown (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand (7.5YR 5/4). Bottom of boring at 5.5 ft bgs Bottom of boring at 5.5 ft bgs	GGED BY Jeffers SPONSIBL Rees	NA E PROFESSI	NA ONAL. 1' and 2.5' s collected fro boring and	REG. NO. 6612 MARKS samples om sidewalls of 5' sample with a
SAMPLES HAMMER WEIGHT. NA DROP NA Right of the body of	Jeffers SPONSIBL Rees		1' and 2.5' s collected fro boring and	6612 MARKS samples om sidewalls of 5' sample with
SAMPLES SAM	Rees		1' and 2.5' s collected fro boring and	6612 MARKS samples of sidewalls of 5' sample with
NAME (USCS): color, moist, % by wt., plast density, structure, cementation, react w/HCl, geo. inter. Surface Elevation. 563.12 ft msl (NAVD 88) -3" asphalt PORLY GRADED GRAVEL with SAND (GP). brown (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand (7.5YR 5/4) as follows: Bottom of boring at 5.5 ft bgs Bottom of boring at 5.5 ft bgs			1' and 2.5' s collected fro boring and	samples om sidewalls of 5' sample with
Surface Elevation. 563.12 ft mst (NAVD 88) -3" asphalt PORLY GRADED GRAVEL with SAND (GP). brown (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand		PI I I I I I I I I I I I I I I I I I I	1' and 2.5' s collected fro boring and	om sidewalls of 5' sample with
- 3" asphalt POORLY GRADED GRAVEL with SAND (GP). brown (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand 2 - PSZB 73- 25 Bottom of boring at 5.5 ft bgs Bottom of boring at 5.5 ft bgs		-	collected fro	om sidewalls of 5' sample with
POORLY GRADED GRAVEL with SAND (GP). brown (7.5YR 5/4), moist, ~85% gravel, ~15% fine to coarse sand 7.5 PSZB 73. 4 -			collected fro	om sidewalls of 5' sample with
10- 11- 12-			Boring back native mate Surface par asphalt	erial
13-				
14		1_1	1.	RMRK



APPENDIX B

SURVEY DATA



SITE PLAN

BORE HOLE & VAPOR WELL LOCATIONS AEROJET - 1300 W OPTICAL DRIVE, AZUSA, CA 91702

DATE OF SURVEY: APRIL 20, 2005

	BORE HOLES								
WELL	NORTH	EAST	LATITUDE (DD)	LONGITUDE (DD)	FS (ELEVATION)				
PSZB-5	1869143 29	6583161 51	34 1284723	-117.9289747	568 66				
PSZB-6	1869128 48	6583132 51	34 1284317	-117 9290705	568 46				
PSZB-10	1868871.76	6583178 47	34 1277261	-117 9289192	565.01				
PSZB-11	1868909 41	6583523 23	34.1278289	-117 9277800	567 48				
PSZB-12	1868760 46	6583357 62	34.1274199	-117 9283275	566.67				
PSZB-21	1869130 59	6583087.89	34 1284375	-117.9292179	569 08				
PSZB-22	1869159 14	6583115 19	34 1285159	-117.9291276	569 40				
PSZB-23	1869130 11	6583197 25	34 1284360	-117.9288566	568 45				
PSZB-24	1869092 39	6583195 92	34 1283324	-117.9288610	567 06				
PSZB-25	1868834 97	6583251,53	34 1276249	-117 9286779	564 22				
PSZB-26	1868808 91	6583267 03	34 1275532	-117,9286268	564 34				
PSZB-27	1868807 49	6583219 15	34 1275495	-117 9287850	562.91				
PSZB-27A	1868800 04	6583222.50	34 1275290	-117.9287739	562 89				
PSZB-28	1868786 19	6583292.11	34 1274908	-117.9285439	564,52				
PSZB-29	1868747 96	6583293.95	34 1273857	-117.9285380	564 26				
PSZ8-30	1868732 88	6583359 38	34 1273441	-117,9283218	566 30				
PSZB-31	1868774 03	6583393 26	34 1274572	-117.9282097	566.92				
PSZB-32	1868917 12	6583475 97	34.1278502	-117 9279361	567 11				
PSZB-33	1868930 47	6583519 16	34 1278868	-117 9277934	567.50				
PSZB-34	1868916.30	6583557.65	34 1278478	-117.9276662	567 91				
PSZB-35	1868873.66	6583559 04	34 1277306	-117 9276617	567 34				
PSZB-36	1869168 92	6583196.02	34 1285427	-117.9288605	569 80				
PSZB-37	1869105 32	6583219 65	34 1283678	-117.9287826	567 98				
PSZB-38	1869051 78	6583195 01	34 1282208	-117.9288642	565 86				
PSZB-39	1868901.87	6583194 22	34 1278088	-117 9288671	564 60				
PSZB-40	1868855 82	6583203 89	34.1276823	-117 9288353	564.24				
PSZB-41	1868758 56	6583222 71	34 1274150	-117.9287733	562 31				
PSZB-42	1868711.52	6583268.08	34 1272857	-117.9286235	563 48				
PSZB-43	1868695.11	6583332 24	34.1272404	-117.9284116	565.22				
PSZB-44	1868721 98	6583418 68	34 1273141	-117.9281259	565 93				
P\$2B-46	1868929.11	6583426.78	34 1278832	-117.9280986	567 08				
PSZB-47	1868902 67	6583399 74	34 1278106	-117.9281880	566 50				
PSZB-49	1868767 34	6583447 98	34 1274387	-117.9280289	566 42				
		VA	POR WELLS						
WELL	NORTH	EAST	LATITUDE (DD)	LONGITUDE (DD)	FS (ELEVATION)				
SVMW-34	1868877.83	6583169 86	34 1277428	-117 9289477	565 64				
SZB-14	1868891 78	6583532.08	34 1277805	-117.9277508	567 08				
	1	1							

DATE OF SURVEY: FEBRUARY 21, 2006

	BORE HOLES							
WELL	NORTH	EAST	LATITUDE (DD)	LONGITUDE (DD)	FS			
				, ,	(ELEVATION)			
PIZB-1	1869132 34	6583197.47	34 1284421	-117 9288558	568 47			
PIZB-2	1869090 16	6583196 19	34 1283262	-117 9288602	567,08			
PIZB-3	1868744 27	6583286 68	34 1273756	-117.9285620	564.35			
PIZB-4	1868770 50	6583394.18	34 1274475	-117 9282067	566 62			
PIZB-6	1868922 41	6583419 07	34 1278648	-117 9281241	566 50			
PSZB-45	1868675 59	6583532.58	34 1271864	-117.9277496	566 11			
PSZB-50	1869217.33	6583145.13	34.1286758	-117 9290286	570 89			
PSZB-51	1869215 78	6583233 38	34.1286713	-117 9287370	571.17			
PSZB-51A	1869215 66	6583239 86	34 1286710	-117.9287156	571 21			
PSZB-52	1869172 29	6583300 38	34.1285517	-117 9285157	569.66			
PSZB-55	1868993 29	6583255 73	34 1280599	-117 9286637	565 77			
PSZB-56	1869009 12	6583194 83	34 1281035	-117 9288649	565 17			
PSZB-57	1868899 28	6583267 77	34 1278016	-117 9286241	565 04			
PSZB-58	1868914 81	6583251 09	34 1278443	-117 9286792	564 75			
PSZB-59	1868813 13	6583299 32	34 1275648	-117 9285200	564 59			
PSZB-60	1868699 02	6583185 82	34 1272515	-117 9288954	561 34			
PSZB-61	1868616.49	6583247 75	34 1270246	-117.9286909	562 16			
PSZB-62	1868615 00	6583364 16	34 1270202	-117.9283063	563 51			
PSZB-63	1868614 65	6583470 19	34 1270191	-117.9279559	564 45			
PSZB-64	1868730 47	6583567.88	34 1273371	-117 9276329	566 21			
PSZ8-65	1868790 97	6583575 48	34.1275034	-117 9276076	567 15			
PSZB-66	1868886 84	6583602 71	34.1277667	-117.9275174	569 20			
PSZB-67	1868948 44	6583604,50	34.1279360	-117 9275113	570 00			
PSZB-69	1868969 77	6583442.74	34 1279949	-117 9280458	568 38			
PSZB-70	1868967 09	6583344.32	34 1279878	-117 9283710	568 09			

PREPARED FOR GEOMATRIX COUNSULTANT, INC.

250 E. RINCON STREET, SUITE 240 CORONA, CA 92829 PHONE (951) 273-7400 FAX (951) 273-7420

I	NO.	DATE	REVISIONS	BY	CAL
		04-25-05	SUBMITTAL	MN	3::3
	1	02-22-06	ADD BORE HOLES	MN]
	2	03-20-06	ADD BORE HOLES & WELLS	MN]
	3	03-24-06	CLIENT'S COMMENTS	MN	
	4	03-31-06	ADD BORE HOLES	MN	

LIBO DIENTRIG - CUIL GIGGIEGRING - GIVIS CHEMITEL SANDES 108 BUSINESS CENTER DRIVE, CORONA, CA 62880 Proce 61-20-9800 Faz 61-20-9746 TOLL: 80-20-1/ADA www.cehrads.com JOB NO 05191

SHEET 1 OF 1

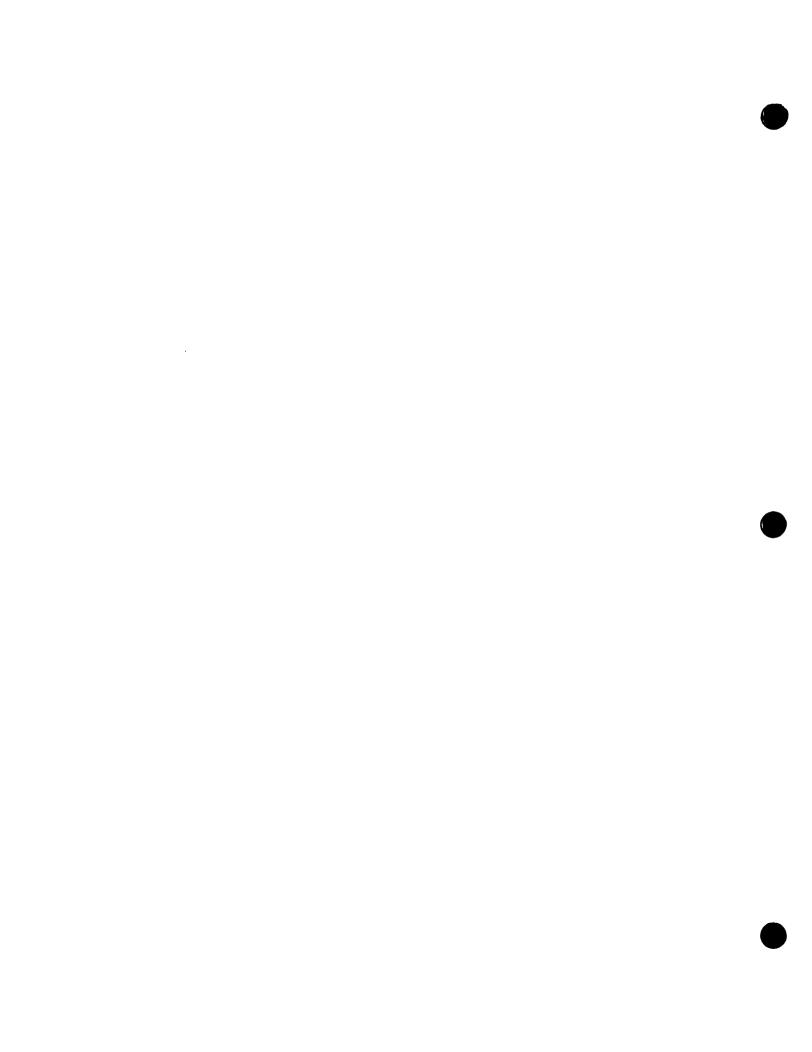


APPENDIX C

LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS



MARCH AND APRIL 2005 SAMPLING



17461Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9699 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2570 E. Suinset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

LABORATORY REPORT

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Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.001.0

Sampled: 03/21/05 Received: 03/21/05 Issued: 03/22/05 15:55

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client This report shall not be reproduced, except in full, without written permission from Del Mar Analytical

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOC1604-01	032105EB	Water
IOC1604-02	PSZB-21-1	Soil
IOC1604-03	PSZB-21-2 1/2	Soil
IOC1604-04	PSZB-21-5	Soil
IOC1604-05	PSZB-21-7 1/2	Soil
IOC1604-06	PSZB-21-10	Soil
IOC1604-07	PSZB-21-15	Soil
IOC1604-08	PSZB-21-20	Soil
IOC1604-09	PSZB-21-25	Soil
IOC1604-10	PSZB-21-30	Soil
IOC1604-11	PSZB-22-1	Soil
IOC1604-12	PSZB-22-2 1/2	Soil
IOC1604-13	PSZB-22-5	Soil
IOC1604-14	PSZB-22-7 1/2	Soil
IOC1604-15	PSZB-22-10	Soil
IOC1604-16	PSZB-22-15	Soil
IOC1604-17	PSZB-22-20	Soil
IOC1604-18	PSZB-22-30	Soil
IOC1604-19	PSZB-23-1	Soil
IOC1604-20	PSZB-23-2 1/2	Soil
IOC1604-21	PSZB-23-5	Soil
IOC1604-22	PSZB-23-7 1/2	Soil
IOC1604-23	PSZB-23-15	Soil



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Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204 Corona, CA 92879

007190.001.0 Report Number: IOC1604

Sampled. 03/21/05

Received: 03/21/05

Attention: Rick Rees

CLIENT ID

MATRIX

LABORATORY ID IOC1604-24 IOC1604-25

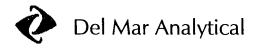
PSZB-23-20 PSZB-23-25 Soil

Soil

Reviewed By:

Del Mar Analytical, Irvine

Jim Hatfield Project Manager



17461Denan Ave , Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-856 FAX (858) 505-9689 9830 South 51st St, Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID. Aerojet Azusa

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Report Number: IOC1604

Sampled: 03/21/05

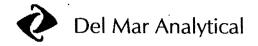
Received: 03/21/05

INORGANICS

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Del Mar Analytical, Irvine

Jim Hatfield Project Manager



17461Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370 4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-859 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Suiset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.001.0

Report Number: IOC1604

Sampled: 03/21/05

Received: 03/21/05

INORGANICS
Reporting

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC1604-11 (PSZB-22-1 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C21112	0.040	ND	1	3/21/2005	3/22/2005	
Sample ID: IOC1604-12 (PSZB-22-2 1/2 - S Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C21112	0.040	ND	1	3/21/2005	3/22/2005	,
Sample ID: IOC1604-13 (PSZB-22-5 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C21112	0.040	ND	1	3/21/2005	3/22/2005	
Sample ID: IOC1604-14 (PSZB-22-7 1/2 - S Reporting Units: mg/kg		5021112	0.040	ND	1		3/22/2003	
Perchlorate Sample ID: IOC1604-15 (PSZB-22-10 - Soi Reporting Units: mg/kg	EPA 314.0 MOD.	5C21112	0.040	ND	1	3/21/2005	3/22/2005	
Perchlorate Sample ID: IOC1604-16 (PSZB-22-15 - So	EPA 314.0 MOD.	5C21112	0.040	ND	1	3/21/2005	3/22/2005	
Reporting Units: mg/kg Perchlorate Sample ID: IOC1604-17 (PSZB-22-20 - So	EPA 314.0 MOD.	5C21112	0.040	ND	1	3/21/2005	3/22/2005	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C21112	0.040	ND	i	3/21/2005	3/22/2005	
Sample ID: 1OC1604-18 (PSZB-22-30 - So Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C21112	0.040	ND	1	3/21/2005	3/22/2005	
Sample ID: IOC1604-19 (PSZB-23-1 - Soil , Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C21112	0.040	ND	ı	3/21/2005	3/22/2005	
Sample ID: IOC1604-20 (PSZB-23-2 1/2 - Reporting Units: mg/kg Perchlorate	•	. 5021112	0.040	0.40		2/21/2005	2 102/0005	
Leteniolate	EPA 314.0 MOD.	3CZ1112	0.040	0.42	1	3/21/2005	3/22/2005	

Del Mar Analytical, Irvine

Jım Hatfield Project Manager



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Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204 Corona, CA 92879

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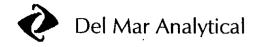
Report Number: IOC1604

Sampled: 03/21/05 Received: 03/21/05

Attention: Rick Rees

INORGANICS

		*11011	GIRITICS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution . Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC1604-21 (PSZB-23-5 - Reporting Units: mg/kg	ŕ							
Perchlorate	EPA 314.0 MOD.	5C21112	4.0	52	100	3/21/2005	3/22/2005	
Sample ID: IOC1604-22 (PSZB-23-7 Reporting Units: mg/kg	1/2 - Soil)							
Perchlorate	EPA 314.0 MOD.	5C21113	4.0	66	100	3/21/2005	3/22/2005	M-HA
Sample ID: IOC1604-23 (PSZB-23-15 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C21113	0.20	1.6	5	3/21/2005	3/22/2005	
Sample ID: IOC1604-24 (PSZB-23-20 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C21113	0.040	0.58	1	3/21/2005	3/22/2005	
Sample ID: IOC1604-25 (PSZB-23-25 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C21113	0.20	1.4	5	3/21/2005	3/22/2005	
				-*-	-			



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250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID. Aerojet Azusa

007190.001.0

Report Number: IOC1604

Sampled: 03/21/05

Received: 03/21/05

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 5C21050 Extracted: 03/21/05										
Blank Analyzed: 03/21/2005 (5C21050-B	LK1)									
Perchlorate	ND	3 0	ug/l							
LCS Analyzed: 03/21/2005 (5C21050-BS	1)									
Perchlorate	48 9	3.0	ug/l	50 0		98	85-115			
Matrix Spike Analyzed: 03/21/2005 (5C2	(1050-MS1)				Source: I	OC1552-0	1			
Perchlorate	55.5	3.0	ug/l	50.0	1.7	108	80-120			
Matrix Spike Dup Analyzed: 03/21/2005	(5C21050-M	(SD1)			Source: I	OC1552-0)1			
Perchlorate	58.7	3.0	ug/l	50.0	1.7	114	80-120	6	20	
Batch: 5C21112 Extracted: 03/21/05										
Blank Analyzed: 03/21/2005 (5C21112-E	LK1)				•					
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/21/2005 (5C21112-BS	51)									
Perchlorate	0 546	0 040	mg/kg	0 500		109	85-115			
Matrix Spike Analyzed: 03/21/2005 (5C	21112-MS1)				Source: I	OC1604-0	02			
Perchlorate	0 513	0 040	mg/kg	0.500	ND	103	80-120			
Matrix Spike Dup Analyzed; 03/21/2005	(5C21112-N	ISD1)			Source: I	OC1604-0)2			
Perchlorate	0.515	0.040	mg/kg	0.500	ND	103	80-120	0	20	
Batch: 5C21113 Extracted: 03/21/05										
Biank Analyzed: 03/22/2005 (5C21113-I	BLK1)						-			
Perchlorate	ND	0 040	mg/kg							



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.001.0

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

Report Number: IOC1604

Sampled: 03/21/05

Received: 03/21/05

METHOD BLANK/QC DATA

INORGANICS

Analyte <u>Batch: 5C21113 Extracted: 03/21/05</u>	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Analyzed: 03/22/2005 (5C21113-BS) Perchlorate	0.566	0.040	mg/kg	0 500		113	85-115			
Matrix Spike Analyzed: 03/22/2005 (5C2	21113-MS1)				Source: I	OC1604-2	22			
Perchlorate	73.0	4 0	mg/kg	0.500	66	1400	80-120			M-HA
Matrix Spike Dup Analyzed: 03/22/2005	•	•			OC1604-2	_				
Perchlorate	81.6	4.0	mg/kg	0.500	66	3120	80-120	11	20	M-HA



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250 East Rincon Street, Suite 204

Report Number: IOC1604

Sampled: 03/21/05 Received: 03/21/05

DATA QUALIFIERS AND DEFINITIONS

M-HA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery

information. See Blank Spike (LCS).

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.001.0

Corona, CA 92879 Attention: Rick Rees Report Number: IOC1604

Sampled: 03/21/05 Received: 03/21/05

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	x
EPA 314.0	Water	N/A	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

KIKI

	Chain-of-Custody Record				12097								c	Date 3 - 21 - 05 Page 1						
Project No	7190.	003								ANALYSES REMARKS					REMARKS .					
Samplers (Sig	inatures)			Water (W). V), or Other	EPA Method 8270	8015	8015			Metals		History 314						g	of containers	Additional Comments
Date	Time	Sample Number		Soil (S), Vapor (EPA Met	ТРН9 by 8015	TPHd by	EPA 8260	EPA 8021	Title 22 I	ыон	7885 7886						Acidifled	No of	
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	Cha	in-of-Custody Re	ecore	ord							12098										Date 3-21-05 Page 3							2 of 2
Project No ·	7190.	003							,	ANALY	'SES									REMARKS							·····	
Samplers (Sign			. Water (W). V). or Other	Soli (S), Water (W). Vapor (V), or Other FPA Method 8270 TPHg by 8015 TPHd by 8015 TPH: EPA 8260						Aetais		Lorante 314									Q	containers		į	Additio	nai Con	nments	
Date	Time	Sample Number	Soil (S), Vapor (EPA Met	TPHg by 8015	TPHd by 8015	TPH.	EPA 8260	EPA 8021	Title 22 Metals	Hold	PEACHLOR									Acidifled	No of c						
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		PSZB-22-30	S									×									_	J						
3-21-05	14:50	PSZB-23-1	S									X										1]					
	1	PSZB - 23 - 2/2	S									X										1						
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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

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007190.003.0

Sampled: 03/22/05 Received: 03/22/05 Issued: 03/23/05 15:17

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOC1696-01	PSZB-24-1	Soil
IOC1696-02	PSZB-24-2.5	Soil
IOC1696-03	PSZB-24-5	Soil
IOC1696-04	PSZB-24-10	Soil
IOC1696-05	PSZB-24-15	Soil
IOC1696-06	PSZB-24-20	Soil
IOC1696-07	PSZB-24-25	Soil
IOC1696-08	PSZB-24-30	Soil
IOC1696-09	PSZB-39-1.5	Soil
IOC1696-10	PSZB-39-2.5	Soil
IOC1696-11	PSZB-39-5	Soil
IOC1696-12	PSZB-39-7.5	Soil
IOC1696-13	PSZB-39-10	Soil
IOC1696-14	PSZB-39-15	Soil
IOC1696-15	PSZB-39-20	Soil
IOC1696-16	PSZB-39-25	Soil
IOC1696-17	PSZB-39-30	Soil
IOC1696-18	PSZB-40-1	Soil
IOC1696-19	PSZB-40-2.5	Soil
IOC1696-20	PSZB-40-5	Soil
IOC1696-21	PSZB-40-7.5	Soil
IOC1696-22	PSZB-40-10	Soil
IOC1696-23	PSZB-40-30	Soil



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Project ID: Aerojet Azusa

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250 East Rincon Street, Suite 204

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Sampled: 03/22/05

Corona, CA 92879 Attention: Rick Rees Report Number: IOC1696

Received: 03/22/05

LABORATORY ID

CLIENT ID
PSZB-40-15

MATRIX Soil

IOC1696-24 IOC1696-25

PSZB-40-20

Soil

Reviewed By:

Del Mar Analytical, Irvine Jim Hatfield

Jim Hattield Project Manager



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Corona, CA 92879

Attention: Rick Rees

Project ID: Aerojet Azusa

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Report Number: IOC1696

Sampled: 03/22/05

Received: 03/22/05

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INORGANICS												
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualisiers				
Sample ID: IOC1696-01 (PSZB-24-1 - Soil Reporting Units: mg/kg Perchlorate	EPA 314,0 MOD.	5C22121	0.040	· ND	1	3/22/2005	3/23/2005					
Sample ID: IOC1696-02 (PSZB-24-2.5 - So Reporting Units: mg/kg		3022121	0.040		•	3/22/2003	3/23/2003					
Perchlorate Sample ID: IOC1696-03 (PSZB-24-5 - Soil	EPA 314.0 MOD.	5C22121	0.040	0.086	1	3/22/2005	3/23/2005					
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C22121	0.80	14	20	3/22/2005	3/23/2005					
Sample ID: IOC1696-04 (PSZB-24-10 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005					
Sample ID: IOC1696-05 (PSZB-24-15 - So Reporting Units: mg/kg Perchlorate	ii) EPA 314.0 MOD.	5C22121	0.040	0.043	1	3/22/2005	3/23/2005					
Sample ID: IOC1696-06 (PSZB-24-20 - So Reporting Units: mg/kg Perchlorate	eil) EPA 314.0 MOD.	5C22121	, 0.040	ND	1	3/22/2005	3/23/2005					
Sample ID: IOC1696-07 (PSZB-24-25 - So Reporting Units: mg/kg	il)		,		-							
Perchlorate Sample ID: IOC1696-08 (PSZB-24-30 - So	EPA 314.0 MOD.	5C22121	0.040	0.12	1	3/22/2005	3/23/2005					
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C22121	0.040	0.12	1	3/22/2005	3/23/2005					
Sample ID: IOC1696-09 (PSZB-39-1.5 - S Reporting Units: mg/kg Perchlorate	oil) EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005					
Sample ID: IOC1696-10 (PSZB-39-2.5 - S	oil)											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005	•				

Del Mar Analytical, Irvine Jim Hatfield

Project Manager

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Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID. Aerojet Azusa

007190.003.0

Report Number: IOC1696

Sampled: 03/22/05

Received: 03/22/05

INORGANICS

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INORGANICS													
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers					
Sample ID: IOC1696-11 (PSZB-39-5 - Soil) Reporting Units: mg/kg)												
Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005						
Sample ID: IOC1696-12 (PSZB-39-7.5 - So Reporting Units: mg/kg	il)			,									
Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005						
Sample ID: IOC1696-13 (PSZB-39-10 - Soi Reporting Units: mg/kg	1)												
Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005						
Sample ID: IOC1696-14 (PSZB-39-15 - Soi Reporting Units: mg/kg	•	5022121	0.040	ND	•	2/22/2005	2/22/2005						
Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005						
Sample ID: IOC1696-15 (PSZB-39-20 - Soi Reporting Units: mg/kg	•												
Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005						
Sample ID: IOC1696-16 (PSZB-39-25 - So Reporting Units: mg/kg					•								
Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005						
Sample ID: IOC1696-17 (PSZB-39-30 - So Reporting Units: mg/kg	il)												
Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005						
Sample ID: IOC1696-18 (PSZB-40-1 - Soil Reporting Units: mg/kg)												
Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005						
Sample ID: IOC1696-19 (PSZB-40-2.5 - So Reporting Units: mg/kg	oil)												
Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005						
Sample ID: 1OC1696-20 (PSZB-40-5 - Soil Reporting Units: mg/kg)												
Perchlorate	EPA 314.0 MOD.	5C22121	0.040	ND	1	3/22/2005	3/23/2005						

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Jim Hatfield Project Manager



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Geomatrix-Corona

Project ID: Aerojet Azusa

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250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

Report Number: IOC1696

Sampled: 03/22/05

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INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC1696-21 (PSZB-40-7.5 - So Reporting Units: mg/kg Perchlorate	eil) EPA 314.0 MOD.	5C22122	0.040	ND	1	3/22/2005	3/23/2005	
Sample ID: IOC1696-22 (PSZB-40-10 - Soi Reporting Units: mg/kg Perchlorate	ii) EPA 314.0 MOD.	5C22122	0.040	ND	1	3/22/2005	3/23/2005	
Sample ID: IOC1696-23 (PSZB-40-30 - Sol Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C22122	0.040	ND	1	3/22/2005	3/23/2005	
Sample ID: IOC1696-24 (PSZB-40-15 - So Reporting Units: mg/kg Perchlorate	ii) EPA 314.0 MOD.	5C22122	0.040	ND	1	3/22/2005	3/23/2005	
Sample ID: IOC1696-25 (PSZB-40-20 - So Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C22122	0.040	ND	1	3/22/2005	3/23/2005	,

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Project ID: Aerojet Azusa

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250 East Rincon Street, Suite 204 Corona, CA 92879

Report Number: IOC1696

Sampled: 03/22/05 Received: 03/22/05

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Attention: Rick Rees

Received. 65/22/6.

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 5C22121 Extracted: 03/22/05										
Blank Analyzed: 03/23/2005 (5C22121-F	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/23/2005 (5C22121-BS	51)									
Perchlorate	0.533	0.040	mg/kg	0 500		_ 107	85-115			
Matrix Spike Analyzed: 03/23/2005 (5C	22121-MS1)				Source: I	OC1696-0	1			
Perchlorate	0.594	0 040	mg/kg	0.500	0 020	115	80-120			
Matrix Spike Dup Analyzed: 03/23/2005	5 (5C22121-M	SD1)			Source: I	OC1696-0)1			
Perchlorate	0.566	0.040	mg/kg	0 500	0 020	109	80-120	5	20	
Batch: 5C22122 Extracted: 03/22/05										
Blank Analyzed: 03/23/2005 (5C22122-1	BLK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/23/2005 (5C22122-B	S1)									
Perchlorate	0 509	0 040	mg/kg	0.500		102	85-115			
Matrix Spike Analyzed: 03/23/2005 (5C	22122-MS1)				Source: I	OC1696-2	21			
Perchlorate	0.528	0 040	mg/kg	0.500	ND	106	80-120			
Matrix Spike Dup Analyzed: 03/23/2009	5 (5C22122-M	SD1)			Source: I	IOC1696-2	21			
Perchlorate	0 509	0 040	mg/kg	0.500	ND	102	80-120	4	20	



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250 East Rincon Street, Suite 204

Report Number: IOC1696

Sampled: 03/22/05

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DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



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Project ID. Aerojet Azusa

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Corona, CA 92879 Attention: Rick Rees Report Number: IOC1696

Sampled: 03/22/05 Received: 03/22/05

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Nelac California Method Matrix EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

	Chain-of-Custody Record								_1	20	99	3					[ate	3-22-05 Page 1 of 2
Project No	7190	. 003					•			ANAL	YSES	i							REMARKS
Samplers (Sign	Time	Sample N	lumber	Soil (S), Water (W). Vapor (V), or Other	EPA Method 8270	TPHg by 8015 TPHd by 8015	TPH:	EPA 8260	EPA 8021	Title 22 Metals	Hold	PERCHIOPATE BPA 314						Acidifled	Additional Comments
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3-12-05	0838	PS 28-2	4 - 3	٤								×						7-	1
3-22-05	0845	PSEB- Z	4 - 5	S								X						-	
3-22-05	0855	PS2B-24	4 - 10	S								X						_	
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	Chain-of-Custody Record											0 1								Date	ز :	?-2	2-05 Page 2 o	f Z
Project No	7190.	003								-	ANAL	YSES	;										REMARKS	
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Date	Time	Sample N	Number	Soil (S), Vapor (EPA Me	TPHg by 8015	TPHd by 8015	TPH	EPA 8260	EPA 8021	Title 22 Metals	Hold	Peach beach								Acidified	No of c		
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17461Denian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E. Coolley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (848) 505-9689 9830 South 514 St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480 785-0851 2520 € Sunset Rd ₱3, Lax Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.003.0

Sampled: 03/23/05 Received: 03/23/05

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Issued: 03/24/05 14:17

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOC1758-01	PSZB-27-1	Soil
IOC1758-02	PSZB-27-2 1/2	Soil
IOC1758-03	PSZB-27-5	Soil
IOC1758-04	PSZB-27-7 1/2	Soil
IOC1758-05	PSZB-27-10	Soil
IOC1758-06	PSZB-27-15	Soil
IOC1758-07	PSZB-27-20	Soil

Reviewed By:

Del Mar Analytical, Irvine

Jim Hatfield Project Manager



17461Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E Cooley Dr., Suite A., Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-856 FAX (858) 505-8689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID. Aerojet Azusa

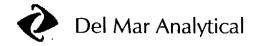
007190.003.0

Report Number: IOC1758

Sampled: 03/23/05 Received: 03/23/05

INORGANICS

INORGANICS													
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers					
Sample ID: IOC1758-01 (PSZB-27-1 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C23111	0.040	0.73	1	3/23/2005	3/23/2005						
Sample ID: IOC1758-02 (PSZB-27-2 1/2 - Reporting Units: mg/kg		3023111	0.040	6.75	•	312312003	3/23/2003						
Perchlorate	EPA 314.0 MOD.	5C23111	0.40	2.3	10	3/23/2005	3/24/2005						
Sample ID: IOC1758-03 (PSZB-27-5 - Soil Reporting Units: mg/kg Perchlorate	EPA 314 0 MOD.	5C23111	0.040	ND	1	3/23/2005	3/24/2005						
Sample ID: IOC1758-04 (PSZB-27-7 1/2 - Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C23111	0.040	ND	1	3/23/2005	3/24/2005						
Sample ID: IOC1758-05 (PSZB-27-10 - So Reporting Units: mg/kg Perchlorate	oil) EPA 314.0 MOD.	5C23111	0.040	ND	1	3/23/2005	3/24/2005						
Sample ID: IOC1758-06 (PSZB-27-15 - So Reporting Units: mg/kg		0020111		2	·	5,55,250	5,5						
Perchlorate Sample ID: IOC1758-07 (PSZB-27-20 - Sc	EPA 314.0 MOD.	5C23111	0.040	ND	1	3/23/2005	3/24/2005						
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C23111	0.040	ND	1	3/23/2005	3/24/2005						



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Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.003.0

Report Number: IOC1758

Sampled: 03/23/05

Received: 03/23/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers				
Blank Analyzed: 03/23/2005 (5C23]11-BLK1)														
Perchlorate	ND	0.040	mg/kg											
LCS Analyzed: 03/23/2005 (5C23111-BS Perchlorate	0.548	0 040	mg/kg	0.500		110	85-115			M-3				



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Geomatrix-Corona Project ID: Aerojet Azusa 250 East Rincon Street, Suite 204

007190.003.0

Sampled: 03/23/05 Corona, CA 92879 Report Number: IOC1758 Received: 03/23/05

Attention: Rick Rees

DATA QUALIFIERS AND DEFINITIONS

M-3 Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was

accepted based on acceptable recovery in the Blank Spike (LCS).

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

Corona, CA 92879 Attention: Rick Rees Report Number: IOC1758

Sampled: 03/23/05

Received: 03/23/05

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Netac California Method EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

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Project No	7190.	00	3										ANA	LYSES	5												***************************************	REM	ARKS				
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17461Denan Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A., Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Suiset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.003.0

Sampled: 03/24/05 Received: 03/24/05 Issued. 03/25/05 12:17

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client.

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This entire report was reviewed and approved for release

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOC1933-01	PSZB-27A-25	Soil
IOC1933-02	PSZB-27A-30	Soil
IOC1933-03	PSZB-28-1	Soil
IOC1933-04	PSZB-28-2 1/2	Soil
IOC1933-05	PSZB-28-5	Soil
IOC1933-06	PSZB-28-10	Soil
IOC1933-07	PSZB-28-15	Soil
IOC1933-08	PSZB-28-20	Soil
IOC1933-09	PSZB-28-25	Soil
IOC1933-10	PSZB-28-30	Soil
IOC1933-11	PSZB-29-1	Soil
IOC1933-12	PSZB-29-2 1/2	Soil
IOC1933-13	PSZB-29-5	Soil
IOC1933-14	PSZB-29-7 1/2	Soil
IOC1933-15	PSZB-29-10	Soil
IOC1933-16	PSZB-29-15	Soil
IOC1933-17	PSZB-29-20	Soil
IOC1933-18	PSZB-29-25	Soil
IOC1933-19	PSZB-29-30	Soil
IOC1933-20	PSZB-30-1	Soil
IOC1933-21	PSZB-30-2 1/2	Soil
IOC1933-22	PSZB-30-5	Soil
IOC1933-23	PSZB-30-7 1/2	Soil



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Project ID: Aerojet Azusa Geomatrix-Corona

250 East Rincon Street, Suite 204 007190.003.0 Sampled: 03/24/05 Corona, CA 92879 Report Number: IOC1933 Received: 03/24/05

Attention: Rick Rees

LABORATORY ID	CLIENT ID	MATRIX
IOC1933-24	PSZB-30-10	Soil
IOC1933-25	PSZB-30-15	Soil
IOC1933-26	PSZB-30-20	Soil
IOC1933-27	PSZB-30-25	Soil
IOC1933-28	PSZB-30-30	Soil

Reviewed By:

Del Mar Analytical, Irvine

Jim Hatfield Project Manager



17461Denan Ave., Suite 100, Irone, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370 1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505 9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Suisset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Attention: Rick Rees

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

Corona, CA 92879

007190 003.0

Report Number: IOC1933

Sampled: 03/24/05

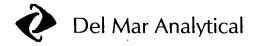
Received: 03/24/05

INORGANICS

	MORGANICS											
ı	Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers			
	mple ID: IOC1933-01 (PSZB-27A-25 - So Reporting Units: mg/kg erchlorate	oil) EPA 314.0 MOD.	5C24118	0.040	ND	1	3/24/2005	3/24/2005				
	ample ID: IOC1933-02 (PSZB-27A-30 - So Reporting Units: mg/kg											
		EPA 314.0 MOD.	5C24118	0.040	ND	1	3/24/2005	3/24/2005				
	ample ID: IOC1933-03 (PSZB-28-1 - Soil) Reporting Units: mg/kg erchlorate	EPA 314.0 MOD.	5C24118	0.040	ND	i	3/24/2005	3/24/2005				
	ample ID: IOC1933-04 (PSZB-28-2 1/2 - S Reporting Units: mg/kg erchlorate	oil) EPA 314.0 MOD.	5C24118	0.040	ND	1	3/24/2005	3/24/2005				
	ample ID: IOC1933-05 (PSZB-28-5 - Soil) Reporting Units: mg/kg		0021110	0.0 10		•	<i>3</i> /12 (10000	5/ 2 // 2000				
Pe	erchlorate	EPA 314.0 MOD.	5C24118	0.040	ND	1	3/24/2005	3/24/2005				
	ample ID: IOC1933-06 (PSZB-28-10 - Soi Reporting Units: mg/kg erchlorate	l) EPA 314.0 MOD.	5C24118	0.040	ND	1	3/24/2005	3/24/2005				
S	ample ID: IOC1933-07 (PSZB-28-15 - Soi Reporting Units: mg/kg	l)										
P	erchlorate	EPA 314.0 MOD.	5C24118	0.040	ND	l	3/24/2005	3/25/2005				
*	ample ID: IOC1933-08 (PSZB-28-20 - Soi Reporting Units: mg/kg erchlorate	il) EPA 314.0 MOD.	5C24118	0.040	ND	1	3/24/2005	3/25/2005				
-	ample ID: IOC1933-09 (PSZB-28-25 - Soi Reporting Units: mg/kg		7 22 1110,	3,3 13		-		2.12 -3-2-3-3				
P	erchlorate	EPA 314.0 MOD.	5C24118	0.040	ND	1	3/24/2005	3/25/2005				
	ample ID: IOC1933-10 (PSZB-28-30 - So Reporting Units: mg/kg											
P	erchlorate	EPA 314 0 MOD.	5C24118	0.040	ND	1	3/24/2005	3/25/2005				

Del Mar Analytical, Irvine

Jim Hatfield Project Manager



17461Derian Ave., Suite 100, Irvne, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370 4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-689 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Suinset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3651

Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.003.0

Report Number: IOC1933

Sampled: 03/24/05

Received: 03/24/05

INORGANICS

INORGANICS								
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC1933-11 (PSZB-29-1 - Soil Reporting Units: mg/kg)							
Perchlorate	EPA 314.0 MOD.	5C24118	0.040	ND	1	3/24/2005	3/25/2005	
Sample ID: IOC1933-12 (PSZB-29-2 1/2 - Reporting Units: mg/kg	Soil)							
Perchlorate	EPA 314.0 MOD.	5C24118	8.0	86	200	3/24/2005	3/25/2005	
Sample ID: IOC1933-13 (PSZB-29-5 - Soil Reporting Units: mg/kg))							
Perchlorate	EPA 314.0 MOD.	5C24118	0.040	0.46	1	3/24/2005	3/25/2005	
Sample ID: IOC1933-14 (PSZB-29-7 1/2 - Reporting Units: mg/kg	Soil)							
Perchlorate	EPA 314.0 MOD.	5C24118	0.040	0.31	1	3/24/2005	3/25/2005	
Sample ID: IOC1933-15 (PSZB-29-10 - So Reporting Units: mg/kg	oil)							
Perchlorate	EPA 314.0 MOD.	5C24119	0.040	0.18	1	3/24/2005	3/24/2005	
Sample ID: IOC1933-16 (PSZB-29-15 - So Reporting Units: mg/kg	oil)						. -	
Perchlorate	EPA 314.0 MOD.	5C24119	0.040	0.057	1	3/24/2005	3/24/2005	
Sample ID: IOC1933-17 (PSZB-29-20 - So Reporting Units: mg/kg	oil)							
Perchlorate	EPA 314.0 MOD.	5C24119	0.040	0.058	1	3/24/2005	3/24/2005	•
Sample ID: IOC1933-18 (PSZB-29-25 - So Reporting Units: mg/kg	oil)							
Perchlorate	EPA 314.0 MOD.	5C24119	0.040	ND	1	3/24/2005	3/24/2005	
Sample ID: IOC1933-19 (PSZB-29-30 - So Reporting Units: mg/kg	oil)							
Perchlorate	EPA 314.0 MOD.	5C24119	0 040	ND	1	3/24/2005	3/24/2005	
Sample ID: 1OC1933-20 (PSZB-30-1 - Soi Reporting Units: mg/kg	il)							
Perchlorate Perchlorate	EPA 314.0 MOD.	5C24119	0.040	ND	1	3/24/2005	3/24/2005	



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Geomatrix-Corona

250 East Rincon Street, Suite 204 Corona, CA 92879

Attention: Rick Rees

Analyte

Project ID: Aerojet Azusa

007190.003.0

INORGANICS

Report Number: IOC1933

Sampled. 03/24/05

Received: 03/24/05

Date

Analyzed

3/24/2005 3/25/2005

3/24/2005 3/25/2005

3/24/2005 3/25/2005

3/24/2005 3/25/2005

Data

Qualifiers

Batch	Reporting	Sample	Dilution	Date
	Limit	Result	Factor	Extracted

0.040

0.040

0.040

ND

ND

ND

Reporting Units: mg/kg				
Perchlorate	EPA 314.0 MOD.	5C24119	0.040	ND
Sample ID: IOC1933-22 (PSZB-30-5 - Soil))			

Method

EPA 314.0 MOD.

EPA 314.0 MOD.

Reporting Units: mg/kg

Sample ID: IOC1933-21 (PSZB-30-2 1/2 - Soil)

Perchlorate EPA 314.0 MOD.

Sample ID: IOC1933-23 (PSZB-30-7 1/2 - Soil) Reporting Units: mg/kg

Perchlorate

Sample ID: IOC1933-24 (PSZB-30-10 - Soil)

Reporting Units: mg/kg Perchlorate

Sample ID: IOC1933-25 (PSZB-30-15 - Soil)

Reporting Units: mg/kg

Perchlorate EPA 314.0 MOD. 5C24119 0.040 ND 3/24/2005 3/25/2005

5C24119

5C24119

5C24119

Sample ID: IOC1933-26 (PSZB-30-20 - Soil)

Reporting Units: mg/kg

Perchlorate EPA 314.0 MOD. 5C24119 0.040 ND 3/24/2005 3/25/2005

Sample ID: IOC1933-27 (PSZB-30-25 - Soil)

Reporting Units: mg/kg

Perchlorate EPA 314.0 MOD. 5C24119 ND 0.040 3/24/2005 3/25/2005

Sample ID: IOC1933-28 (PSZB-30-30 - Soil)

Reporting Units: mg/kg

Perchiorate - EPA 314.0 MOD. 5C24119 0.040 0.078 3/24/2005 3/25/2005

Del Mar Analytical, Irvine Jim Hatfield

Project Manager

17461Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr , Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St , Suite 8120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879
Attention: Rick Rees

Project ID: Aerojet Azusa

007190.003.0

Report Number: IOC1933

Sampled: 03/24/05 Received: 03/24/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5C24118 Extracted: 03/24/05		•								
Blank Analyzed: 03/24/2005 (5C24118-B	•									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/25/2005 (5C24118-BS	,									
Perchlorate	0.522	0.040	mg/kg	0 500		104	85-115			
Matrix Spike Analyzed: 03/24/2005 (5C2	24118-MS1)				Source: I	OC1933-0)1			
Perchlorate	0 539	0 040	mg/kg	0.500	ND	108	80-120			
Matrix Spike Dup Analyzed: 03/24/2005	(5C24118-M	SD1)			Source: 1	OC1933-0)1			
Perchlorate	0 560	0.040	mg/kg	0.500	ND	112	80-120	4	20	
Batch: 5C24119 Extracted: 03/24/05										
Blank Analyzed: 03/24/2005 (5C24119-I	BLK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/24/2005 (5C24119-BS	S1)									
Perchlorate	0 501	0.040	mg/kg	0.500		100	85-115			
Matrix Spike Analyzed: 03/24/2005 (5C	24119-MS1)				Source: !	OC1933-	15			
Perchlorate	0.679	0 040	mg/kg	0.500	0.18	100	80-120			
Matrix Spike Dup Analyzed: 03/24/2005	5 (5C24119-M	SD1)			Source: 1	IOC1933-	15			
Perchlorate	0 673	0 040	mg/kg	0.500	0.18	99	80-120	1	20	



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: 1OC1933

Sampled: 03/24/05

Received: 03/24/05

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

Corona, CA 92879 Report Number: IOC1933 Attention: Rick Rees

Sampled: 03/24/05

Received: 03/24/05

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method	Matrix	Nelac	California	
EPA 314.0 MOD.	Soil	N/A	N/A	

Nevada and NELAP provide analyte specific accreditations Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www dmalabs com.

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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.003.0

Sampled: 03/25/05 Received. 03/25/05 Issued: 03/28/05 14:04

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

This entire report was reviewed and approved for release

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOC2060-01	032505EB	Water
IOC2060-02	PSZB-31-1	Soil
IOC2060-03	PSZB-31-2 1/2	Soil
IOC2060-04	PSZB-31-5	Soil
IOC2060-05	PSZB-31-7 1/2	Soil
IOC2060-06	PSZB-31-10	Soil
IOC2060-07	PSZB-31-15	Soil
IOC2060-08	PSZB-31-20	Soil
IOC2060-09	PSZB-31-25	Soil
IOC2060-10	PSZB-31-30	Soil
IOC2060-11	PSZB-32-1	Soil
IOC2060-12	PSZB-32-2 1/2	Soil
IOC2060-13	PSZB-32-5	Soil
IOC2060-14	PSZB-32-7 1/2	Soil
IOC2060-15	PSZB-32-10	Soil
IOC2060-16	PSZB-32-15	Soil
IOC2060-17	PSZB-32-20	Soil
IOC2060-18	PSZB-32-25	Soil
IOC2060-19	PSZB-32-30	Soil
IOC2060-20	PSZB-33-I	Soil
IOC2060-21	PSZB-33-2 1/2	Soil
IOC2060-22	PSZB-33-5	Soil
IOC2060-23	PSZB-33-7 1/2	Soil



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Geomatrix-Corona Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204 007190.003.0 Sampled: 03/25/05

Corona, CA 92879 Report Number: IOC2060 Received: 03/25/05 Attention: Rick Rees

> LABORATORY ID **CLIENT ID MATRIX** IOC2060-24 PSZB-33-10 Soil IOC2060-25 PSZB-33-15 Soil IOC2060-26 PSZB-33-20 Soil IOC2060-27 Soil PSZB-33-25 IOC2060-28 PSZB-33-30 Soil

Reviewed By:

Del Mar Analytical, Irvine

Jim Hatfield Project Manager



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Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.003.0 Report Number: IOC2060

Sampled. 03/25/05

Corona, CA 92879 Attention: Rick Rees 60 Received: 03/25/05

INORGANICS

		INUK	GANICS					
Analyte .	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2060-01 (032505EB - W Reporting Units: ug/l	•							
Perchlorate	EPA 314.0	5C25061	3.0	ND	1	3/25/2005	3/25/2005	
Sample ID: IOC2060-02 (PSZB-31-1 - So Reporting Units: mg/kg	oil)							
Perchlorate	EPA 314.0 MOD.	5C25108	0.040	ND	ŀ	3/25/2005	3/25/2005	
Sample ID: IOC2060-03 (PSZB-31-2 1/2 Reporting Units: mg/kg	- Soil)							
Perchlorate	EPA 314.0 MOD.	5C25108	0.040	0.061	1	3/25/2005	3/25/2005	
Sample ID: IOC2060-04 (PSZB-31-5 - Sample ID: IOC20	oil)							-
Perchlorate	EPA 314.0 MOD.	5C25108	0.040	0.041	1	3/25/2005	3/25/2005	
Sample ID: IOC2060-05 (PSZB-31-7 1/2 Reporting Units: mg/kg	! - Soil)							
Perchlorate	EPA 314.0 MOD.	5C25108	0.040	ND	ı	3/25/2005	3/26/2005	
Sample ID: IOC2060-06 (PSZB-31-10 - Reporting Units: mg/kg	Soil)							
Perchlorate	EPA 314.0 MOD.	5C25108	0.040	ND	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-07 (PSZB-31-15 - Reporting Units: mg/kg	Soil)							
Perchlorate	EPA 314.0 MOD.	5C25108	0.040	0.29	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-08 (PSZB-31-20 - Reporting Units: mg/kg	Soil)				*			
Perchlorate	EPA 314.0 MOD.	5C25108	0.040	0.21	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-09 (PSZB-31-25 -	Soil)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25108	0 040	0.45	i	3/25/2005	3/26/2005	
Sample ID: IOC2060-10 (PSZB-31-30 -	Soil)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25108	0.040	0.47	1	3/25/2005	3/26/2005	·*

Del Mar Analytical, Irvine Jim Hatfield

Project Manager

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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

Report Number: IOC2060

Sampled: 03/25/05 Received: 03/25/05

INORGANICS

		INOR	GANICS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2060-11 (PSZB-32-1 - Soil Reporting Units: mg/kg)							
Perchlorate	EPA 314.0 MOD.	5C25108	0.040	ND	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-12 (PSZB-32-2 1/2 - Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C25108	0.040	0.76	1	. 3/25/2005	3/26/2005	
0 I ID 10030/0 12 /D07D 22 5 0 U								
Sample ID: IOC2060-13 (PSZB-32-5 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25108	0 080	0.94	2	3/25/2005	3/26/2005	
Sample ID: IOC2060-14 (PSZB-32-7 1/2 -	Soil)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25108	20	75	500	3/25/2005	3/26/2005	
Sample ID: IOC2060-15 (PSZB-32-10 - So	il)					,		
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25109	0.80	17	20	3/25/2005	3/26/2005	м-на
Sample ID: IOC2060-16 (PSZB-32-15 - So	il)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25109	0.040	0.051	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-17 (PSZB-32-20 - So	ત્રી)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25109	0 040	0.13	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-18 (PSZB-32-25 - So	il)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25109	0.040	0.070	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-19 (PSZB-32-30 - So	oil)							
Reporting Units: mg/kg Perchlorate	EPA: 314.0 MOD.	5C25109	0.040	ND	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-20 (PSZB-33-1 - Soi	1)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25109	0.040	ND	1	3/25/2005	3/26/2005	



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IOC2060

Sampled: 03/25/05 Received: 03/25/05

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INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: 1OC2060-21 (PSZB-33-2 1/2 - Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C25109	0.040	ND	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-22 (PSZB-33-5 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25109	0.040	ND	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-23 (PSZB-33-7 1/2 - Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C25109	0.040	0.13	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-24 (PSZB-33-10 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C25109	0.040	0.091	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-25 (PSZB-33-15 - So Reporting Units: mg/kg Perchlorate	ii) EPA 314.0 MOD.	5C25109	0.040	0.053	1	3/25/2005	3/26/2005	
Sample ID: IOC2060-26 (PSZB-33-20 - So Reporting Units: mg/kg	oil)				1		•,•••	
Perchlorate Sample ID: IOC2060-27 (PSZB-33-25 - So Reporting Units: mg/kg	EPA 314.0 MOD.	5C25109	0.040	0.092	1	3/25/2005	3/26/2005	
Perchlorate Sample ID: IOC2060-28 (PSZB-33-30 - Sc	EPA 314.0 MOD.	5C25109	0.040	0.10	1	3/25/2005	3/26/2005	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C25109	0.040	0.049	1	3/25/2005	3/26/2005	

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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IOC2060

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Sampled: 03/25/05

Received: 03/25/05

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5C25061 Extracted: 03/25/05										
Blank Analyzed: 03/25/2005 (5C25061-B	•									
Perchlorate	ND	3.0	ug/l							
LCS Analyzed: 03/25/2005 (5C25061-BS	1)									
Perchlorate	49.1	3.0	ug/l	50 0		. 98	85-115			
Matrix Spike Analyzed: 03/25/2005 (5C2	25061-MS1)				Source: I	OC2024-0)1			
Perchlorate	49 8	3 0	ug/l	50 0	1.3	97	80-120			
Matrix Spike Dup Analyzed: 03/25/2005	(5C25061-N	1SD1)			Source: I	OC2024-0)1			
Perchlorate	50 4	3.0	ug/l	50 0	1.3	98	80-120	1	20	
Batch: 5C25108 Extracted: 03/25/05										
Blank Analyzed: 03/25/2005 (5C25108-B	BLK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/25/2005 (5C25108-BS	61)									
Perchlorate	0.571	0.040	mg/kg	0 500		114	85-115			
Matrix Spike Analyzed: 03/25/2005 (5C2	25108-MS1)				Source: I	OC2060-	02			
Perchlorate	0.525	0.040	mg/kg	0 500	ND	105	80-120			
Matrix Spike Dup Analyzed: 03/25/2005	5 (5C25108-N	ASD1)			Source: I	OC2060-	02			
Perchlorate	0.581	0.040	mg/kg	0 500	ND	116	80-120	10	20	
Batch: 5C25109 Extracted: 03/25/05										
Blank Analyzed: 03/25/2005 (5C25109-I	BLK1)									
Perchlorate	ND	0.040	mg/kg							



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

Report Number: IOC2060

Sampled: 03/25/05

Received: 03/25/05

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

METHOD BLANK/QC DATA

INORGANICS

Analyte Batch: 5C25109 Extracted: 03/25/05	Result	Reporting Limit	Units	Spike Level	Source Result ~ %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Analyzed: 03/25/2005 (5C25109-BS Perchlorate	1) 0.518	0.040	mg/kg	0.500	104	85-115			
Matrix Spike Analyzed: 03/26/2005 (5C2	5109-MS1)				Source: IOC2060	-15			
Perchlorate	18.6	0.80	mg/kg	0.500	17 320	80-120			M-HA
Matrix Spike Dup Analyzed: 03/26/2005	(5C25109-N	ASD1)			Source: IOC2060	-15			
Perchlorate	18.3	0 80	mg/kg	0.500	17 260	80-120	2	20	M-HA



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Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.003.0

Report Number: IOC2060

Sampled: 03/25/05

Received: 03/25/05

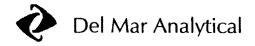
DATA QUALIFIERS AND DEFINITIONS

M-HA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery

information. See Blank Spike (LCS).

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (999) 370-4667 FAX (949) 370 1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Suinset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.003.0

Corona, CA 92879 Attention: Rick Rees Report Number: IOC2060

Sampled: 03/25/05

Received: 03/25/05

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	X
EPA 314.0	Water	N/A	X

Nevada and NELAP provide analyte specific accreditations Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com

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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa 007190.003.0

Sampled: 03/28/05 Received: 03/28/05

ingen til som i skall for til at foresklagskilt som i skall

Issued: 03/29/05 17:09

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOC2148-01	PSZB-34-1	Soil
IOC2148-02	PSZB-34-2 1/2	Soil
IOC2148-03	PSZB-34-5	Soil
IOC2148-04	PSZB-34-7 1/2	Soil
IOC2148-05	PSZB-34-10	Soil
IOC2148-06	PSZB-34-15	Soil
IOC2148-07	PSZB-34-20	Soil
IOC2148-08	PSZB-34-25	Soil
IOC2148-09	PSZB-34-30	Soil
IOC2148-10	PSZB-35-1	Soil
IOC2148-11	PSZB-35-2 1/2	Soil
IOC2148-12	PSZB-35-5	Soil
IOC2148-13	PSZB-35-7 1/2	Soil
IOC2148-14	PSZB-35-10	Soil
IOC2148-15	PSZB-35-15	Soil
IOC2148-16	PSZB-35-20	Soil
1OC2148-17	PSZB-35-25	Soil
IOC2148-18	PSZB-35-30	Soil

Reviewed By:

Del Mar Analytical, Irvine

Jim Hatfield Project Manager



17461Derian Ave., Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92124 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) SOS-856 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0041 FAX (480) 785-0851 2520 E Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.003.0

Sampled: 03/28/05

Corona, CA 92879 Attention: Rick Rees Report Number: IOC2148

Received: 03/28/05

INORGANICS

	Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date ' Extracted	Date Analyzed	Data Qualifiers
	Sample ID: IOC2148-01 (PSZB-34-1 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C28099	0.040	ND	1	3/28/2005	3/28/2005	
	Sample ID: IOC2148-02 (PSZB-34-2 1/2 - S Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C28099	0.20	1.6	5	3/28/2005	3/29/2005	
	Sample ID: 10C2148-03 (PSZB-34-5 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C28099	0.040	0.086	1	3/28/2005	3/29/2005	
	Sample ID: IOC2148-04 (PSZB-34-7 1/2 - S Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C28099	0.040	0.056	1	3/28/2005	3/28/2005	
	Sample ID: IOC2148-05 (PSZB-34-10 - Soi Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C28099	0.040	0.047	1	3/28/2005	3/28/2005	
	Sample 1D: IOC2148-06 (PSZB-34-15 - Soi Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C28099	0.040	0.12	1	3/28/2005	3/29/2005	
	Sample ID: IOC2148-07 (PSZB-34-20 - Soi Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C28099	0.040	0.064	1	3/28/2005	3/29/2005	
	Sample ID: IOC2148-08 (PSZB-34-25 - Soi Reporting Units: mg/kg Perchlorate	ii) EPA 314.0 MOD.	5C28099	0.040	0.046	1	3/28/2005	3/29/2005	
	Sample ID: IOC2148-09 (PSZB-34-30 - Soi Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C28099	0.040	0.045	1	3/28/2005	3/29/2005	
,	Sample ID: IOC2148-10 (PSZB-35-1 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C28099	0.040	ND	1	3/28/2005	3/29/2005	
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Del Mar Analytical, Irvine Jim Hatfield

Project Manager



17461Denan Ave , Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505 856 FAX (858) 505 9689 9830 South 51s St., Suite B-120, Phoenix, AZ 85044 (480) 785-0041 FAX (480) 785-0851 2520 E Suiset Rd #3, Lás Vegas, NV 89120 (702) 798-3620 FAX (702) 798 3621

Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.003.0

Report Number: IOC2148

Sampled: 03/28/05

Received: 03/28/05

INORGANICS

		MOR	GAINICS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2148-11 (PSZB-35-2 1) Reporting Units: mg/kg Perchlorate	/ 2 - Soil) EPA 314.0 MOD	5C28099	0.040	ND	1	3/28/2005	3/29/2005	
Sample ID: IOC2148-12 (PSZB-35-5 - Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C28099	0.040	ND	1	3/28/2005	3/29/2005	
Sample ID: IOC2148-13 (PSZB-35-7 1. Reporting Units: mg/kg Perchlorate	/2 - Soil) EPA 314.0 MOD.	5C28099	0.040	ND	i	3/28/2005	3/29/2005	
Sample ID: IOC2148-14 (PSZB-35-10 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C28099	0.040	. ND	. 1	3/28/2005	3/29/2005	
Sample ID: IOC2148-15 (PSZB-35-15 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C28099	0.040	ND	1	3/28/2005	3/29/2005	
Sample ID: IOC2148-16 (PSZB-35-20 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C28099	0.040	ND	1	3/28/2005	3/29/2005	
Sample ID: IOC2148-17 (PSZB-35-25 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C28099	0 040	ND	1	3/28/2005	3/29/2005	
Sample ID: IOC2148-18 (PSZB-35-30 Reporting Units: mg/kg	- Soil)		0.040			,		
Perchlorate	EPA 314.0 MOD.	5C28099	0.040	ND	1	3/28/2005	3/29/2005	



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

Sampled: 03/28/05

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IOC2148

Received: 03/28/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
•	Acsuit	Lillin	Omis	Devel	Kesuit	/eREC	Limis	KLD	Linn	Quantities
Batch: 5C28099 Extracted: 03/28/05										
Blank Analyzed: 03/28/2005 (5C28099-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/28/2005 (5C28099-BS	51)									
Perchlorate	0.547	0.040	mg/kg	0.500		109	85-115			
Matrix Spike Analyzed: 03/28/2005 (5C	28099-MS1)				Source: I	OC2148-0)1			
Perchlorate	0.564	, 0.040	mg/kg	0.500	0 021	109	80-120			
Matrix Spike Dup Analyzed: 03/28/2005	(5C28099-I	MSD1)			Source: I	OC2148-0)1			
Perchlorate	0.565	0 040	mg/kg	0.500	0.021	109	80-120	0	20	



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667. FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003 0

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IOC2148

Sampled: 03/28/05

Received: 03/28/05

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461Derran Ave., Surte 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Surte A. Colton, CA 92324 (909) 370-4667 FAX (949) 370 1046 9484 Chesapeake Dr., Surte 805, San Diego, CA 92123 (858) 505-856 FAX (858) 505-8689 9830 South 51st St., Surte B-120, Phoenix, AZ 85044 (480) 785-0041 FAX (860) 785-0851 2520 E. Suriset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.003.0

Corona, CA 92879 Attention: Rick Rees Report Number: IOC2148

Sampled. 03/28/05

Received: 03/28/05

Certification Summary

Del Mar Analytical, Irvine

	Method	Matrix	Nelac	California
EPA	314.0 MOD.	Soil	N/A	N/A

Nevada and NELAP provide analyte specific accreditations Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www dmalabs.com

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Project No	7190.	003								ANAL	YSES	i									REMARKS
Samplers (Sign.	atures)	•	Water (W)	Vapor (V), or Other	, 8015	7 8015		0	-	Metals		poselsturente GPA 314							p	No. of containers	Additional Comments
Date	Time	Sample Number	Soll (S)	Vapor (TPHg by	трна бу	ТРИ	EPA 8260	EPA 8021	Title 22	нои	900c							Acidified	No. of	IX 5148
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3-28-05	0914	PS=3-34-21	2 S	s 📗								×							_	1	
3-28-05	0917	2-4E-858	9	S								X							_	1	
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Project No :	1190.	003								ANA	LYSE	S										REMARKS	
Samplers (Signa	atures)	-		Soil (S), Water (W), Vapor (V), or Other	EPA Method 8270	, 8015	, 8015		, -	Metals		PERENIONATE				-				p	containers	Additional Co	mments
Date	Time	Sample	Number	Soil (S). Vapor (EPA Me	TPHg by 8015	TPHd by	TPH.	EPA 8021	Title 22 Metals	HOIG	Ser C								Acidifled	No of c		
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3-28-05	1208	PSZB-	35 - 25	S								X								_	1		
3-28-05	1217	PS&B-	35-30	5								X								-			
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Company:	in at		1430	Compan						16	70] "	mpar	1 y								Corona, Cali (951) 273-74	
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17461Denan Ave., Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A., Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-859 FAX (858) 505-9689 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785 0043 FAX (480) 785-0851 2520 E. Suinset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3620

LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa 007190.003.0

Sampled: 03/29/05 Received: 03/29/05 Issued: 03/30/05 16:35

NELAP #01108CA California ELAP#1197 CSDLAC #10117

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This entire report was reviewed and approved for release

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOC2257-01	PSZB-36-1	Soil
IOC2257-02	PSZB-36-2 1/2	Soil
IOC2257-03	PSZB-36-5	Soil
IOC2257-04	PSZB-36-7 1/2	Soil
IOC2257-05	PSZB-36-10	Soil
IOC2257-06	PSZB-36-15	Soil
IOC2257-07	PSZB-36-20	Soil
IOC2257-08	PSZB-36-25	Soil
IOC2257-09	PSZB-36-30	Soil
IOC2257-10	PSZB-37-1	Soil
IOC2257-11	PSZB-37-2 1/2	Soil
IOC2257-12	PSZB-37-5	Soil
IOC2257-13	PSZB-37-7 1/2	Soil
IOC2257-14	PSZB-37-10	Soil
IOC2257-15	PSZB-37-15	Soil
IOC2257-16	PSZB-37-20	Soil
IOC2257-17	PSZB-37-25	Soil
IOC2257-18	PSZB-37-30	Soil
IOC2257-19	PSZB-38-1	Soil
IOC2257-20	PSZB-38-2 1/2	Soil
IOC2257-21	PSZB-38-5	Soil
IOC2257-22	PSZB-38-7 I/2	Soil
IOC2257-23	PSZB-38-10	Soil



IOC2257-36

17461Derian Ave , Suite 100, Irvne, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 € Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370 1046 9484 Chesapeake Dr , Suite 805, San Diego, CA 92123 (858) 505-856 FAX (858) 505-9689 9830 South 51sl St., Suite 8120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 € Suinset Rd, #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.003.0

PSZB-25-30

Corona, CA 92879
Attention: Rick Rees

Report Number: IOC2257

Sampled: 03/29/05

Received: 03/29/05

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LABORATORY ID	CLIENT ID
IOC2257-24	PSZB-38-15
IOC2257-25	PSZB-38-20
IOC2257-26	PSZB-38-25
IOC2257-27	PSZB-38-30
IOC2257-28	PSZB-25-1
IOC2257-29	PSZB-25-2 1/2
IOC2257-30	PSZB-25-5
IOC2257-31	PSZB-25-7 1/2
IOC2257-32	PSZB-25-10
IOC2257-33	PSZB-25-15
IOC2257-34	PSZB-25-20
IOC2257-35	PSZB-25-25

MATRIX
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Reviewed By:

Del Mar Analytical, Irvine

Jim Hatfield

Project Manager

17461Derian Ave , Suite 100, Irvnne, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370 1046 9484 Chesapeake Dr , Suite 805, San Diego, CA 92123 (858) 505-856 FAX (858) 505-9689 9830 South 51st St , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID. Aerojet Azusa

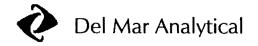
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Report Number: IOC2257

Sampled: 03/29/05 Received: 03/29/05

INORGANICS

		INOR	GANICS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2257-01 (PSZB-36-1 - So Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29111	0.040	0.51	1	3/29/2005	3/29/2005	
. Sample ID: IOC2257-02 (PSZB-36-2 1/2 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C29111	4.0	38	100	3/29/2005	3/30/2005	
Sample ID: IOC2257-03 (PSZB-36-5 - So Reporting Units: mg/kg Perchlorate	ii) EPA 314.0 MOD.	5C29111	0.040	0.28	1	3/29/2005	3/30/2005	,
Sample ID: IOC2257-04 (PSZB-36-7 1/2 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C29111	0.40	2.1	10	3/29/2005	3/30/2005	
Sample ID: IOC2257-05 (PSZB-36-10 - S Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-06 (PSZB-36-15 - S Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	•
Sample ID: IOC2257-07 (PSZB-36-20 - S Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-08 (PSZB-36-25 - S Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-09 (PSZB-36-30 - S Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-10 (PSZB-37-1 - Se Reporting Units: mg/kg Perchlorate	eil) EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	



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Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.003.0

Corona, CA 92879 Attention: Rick Rees Report Number: IOC2257

Sampled: 03/29/05 Received: 03/29/05

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		INOR	RGANICS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2257-11 (PSZB-37-2 1/2 - S Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C29111	0.040	0.17	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-12 (PSZB-37-5 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29111	0.040	0.044	ī	3/29/2005	3/30/2005	
Sample ID: IOC2257-13 (PSZB-37-7 1/2 - 5 Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-14 (PSZB-37-10 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-15 (PSZB-37-15 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29111	0.040	0.048	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-16 (PSZB-37-20 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	(
Sample ID: IOC2257-17 (PSZB-37-25 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29111	0 040	ND	1	3/29/2005	3/30/2005	
Sample ID: 1OC2257-18 (PSZB-37-30 - So Reporting Units: mg/kg Perchlorate	ii) EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-19 (PSZB-38-1 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29113	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-20 (PSZB-38-2 1/2 - Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C29111	0.040	0.093	1	3/29/2005	3/30/2005	

Del Mar Analytical, IrvineJim Hatfield

Project Manager

17461Derian Ave., Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A., Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-859 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Suinset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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250 East Rincon Street, Suite 204

Corona, CA 92879 Attention Rick Rees Project 1D: Aerojet Azusa

007190.003.0

Report Number: 1OC2257

Sampled: 03/29/05 Received: 03/29/05

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INORGANICS

		INOF	RGANICS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2257-21 (PSZB-38-5 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29111	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-22 (PSZB-38-7 1/2 - Reporting Units: mg/kg		3027111	0.010		•	<i>5</i> ,2,,2005	5,50,200	
Perchlorate Perchlorate	EPA 314.0 MOD.	5C29091	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-23 (PSZB-38-10 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C29091	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-24 (PSZB-38-15 - So		3029071	0.040	ND	•	3/2//2003	3/30/2003	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29091	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-25 (PSZB-38-20 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C29091	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-26 (PSZB-38-25 - So Reporting Units: mg/kg Perchlorate	ii) EPA 314.0 MOD.	5C29091	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-27 (PSZB-38-30 - So		3027071	0.010	1,2	•	3,23,2000	3.30.2003	
Reporting Units: mg/kg Perchlorate	EPA 314 0 MOD.	5C29091	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-28 (PSZB-25-I - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29091	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-29 (PSZB-25-2 1/2 -		3029091	0.040	ND	1	3/29/2003	3/30/2003	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29091	0.040	0.048	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-30 (PSZB-25-5 - Soi	l)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C29113	0.040	ND	1	3/29/2005	3/30/2005	



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Corona, CA 92879

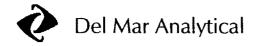
Report Number: IOC2257

Sampled: 03/29/05 Received: 03/29/05

Attention: Rick Rees

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2257-31 (PSZB-25-7 1/2	2 - Soil)							
Reporting Units: mg/kg							,	
Perchlorate	EPA 314.0 MOD.	5C29113	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-32 (PSZB-25-10 -	Soil)							
Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	5C29113	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-33 (PSZB-25-15 -	Soil)							
Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	5C29113	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-34 (PSZB-25-20 -	Soil)							
Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	5C29113	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-35 (PSZB-25-25 -	Soil)							
Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	5C29113	0.040	ND	1	3/29/2005	3/30/2005	
Sample ID: IOC2257-36 (PSZB-25-30 -	Soil)							
Reporting Units: mg/kg	,							
Perchlorate	EPA 314.0 MOD.	5C29113	0.040	ND	1	3/29/2005	3/30/2005	



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Report Number: IOC2257

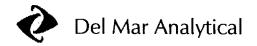
Sampled: 03/29/05

Received: 03/29/05

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 5C29091 Extracted: 03/29/05										
Blank Analyzed: 03/29/2005 (5C29091-B	LK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/29/2005 (5C29091-BS	1)									
Perchlorate	0 511	0 040	mg/kg	0.500		102	85-115			
Matrix Spike Analyzed: 03/29/2005 (5C2	9091-MS1)				Source: I	OC2131-0	2			
Perchlorate	0.544	0 040	mg/kg	0.500	ND	109	80-120			
Matrix Spike Dup Analyzed: 03/29/2005	(5C29091-MS	SD1)			Source: I	OC2131-0	12			
Perchlorate	0 553	0.040	mg/kg	0 500	ND	111	80-120	2	20	
Batch: 5C29111 Extracted: 03/29/05										
Blank Analyzed: 03/29/2005 (5C29111-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/29/2005 (5C29111-BS	1)									
Perchlorate	0.538	0 040	mg/kg	0.500		108	85-115			M-3
Batch: 5C29113 Extracted: 03/29/05										
Blank Analyzed: 03/30/2005 (5C29113-B	LKI)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/30/2005 (5C29113-BS	31)									
Perchlorate	0 531	0.040	mg/kg	0 500		106	85-115			



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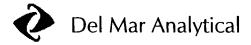
Sampled: 03/29/05

Received: 03/29/05

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 5C29113 Extracted: 03/29/05										
Matrix Spike Analyzed: 03/30/2005 (5C	29113-MS1)				Source: I	OC2257-1	9			
Perchlorate	0.549	0.040	mg/kg	0.500	0 015	107	80-120			
Matrix Spike Dup Analyzed: 03/30/2005	(5C29113-M	SD1)			Source: I	OC2257-1	9			
Perchlorate	0.542	0.040	mg/kg	0.500	0.015	105	80-120	1	20	



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Project ID: Aerojet Azusa

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

007190.003.0 Report Number: IOC2257

Sampled: 03/29/05 Received: 03/29/05

DATA QUALIFIERS AND DEFINITIONS

M-3 Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was

accepted based on acceptable recovery in the Blank Spike (LCS).

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



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Attention: Rick Rees

Project ID: Aerojet Azusa

007190.003.0

250 East Rincon Street, Suite 204 Report Number: IOC2257 Corona, CA 92879

Sampled: 03/29/05

Received: 03/29/05

Certification Summary

Del Mar Analytical, Irvine

California Method Matrix Netac EPA 314.0 MOD Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com

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Samplers (Sign	atures)	✓.		Water (W), V), or Other	EPA Method 8270	, 8015	, 8015		0	1	Metals		7 GACALLORESTE COR 314	-							,	containers	Additional Comments
Date	Time	Sample Number		Soil (S) Vapor (EPA Mei	TPHg by 8015	үд рнд т	TPH	EPA 8260	EPA 8021	Title 22 Metals	ыон	33								Acidifica	No. of	100 /
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3-29-05	1026	PS, 28 - 36 -	30	S									X								-	J	
3-29-05	1115	PSEB - 37-1		5									X									J	
3-29-05	1123	PSZB-37-2	ኢ	S									X								_	1	
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3-29-05	DEI	PSZ6-37-7	4										×								-	J	
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Project No	1190.	003	-							ANAL	YSES	3				``					REMARKS
Samplers (Sign	atures)), Water (W), (V), or Other	EPA Method 8270	by 8015	by 8015		-	Metais		PGACHIOENTE EPA 314							ō	of containers	Additional Comments
Date	Time	Sample N	Number	Soil (S), Vapor (V	EPA Me	тРН9 Бу	ו ס	EPA 8260	EPA 8021	Title 22	-Hold	20							Acidifled	No of	
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3-29-05	1210	PSZB-	37-30	S					L			X	┙						<u> </u>]]	
3-29-05	1257	PSZB -39	8-1	S								X	\perp]	
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Received (sign	ature)			Received			e) ·			Dat			ived	signatu	re)				Date:	1	
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Project No	7190.	003										ANA	LYSE	S										-	REMARKS			
Samplers (Sign	atures) LJC	·			i), water (w), (V), or Other	EPA Method 8270	ТРН9 by 8015	TPHd by 8015		09.	121	Title 22 Metals		Perchamate Con 314								led	containers	Α	dditional Con	iments		
Date	Time	Samp	ole Number		Soil (S), W: Vapor (V),	EPA M	TPHg (TPHd (₹ E	EPA 8260	EPA 8021	Title 22	Hold	39								Acidified	No of					
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LABORATORY REPORT

Prepared For: Geomatr

Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.003.0

Sampled: 03/30/05 Received: 03/30/05

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Issued: 03/31/05 18:01

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOC2349-01	PSZB-26-1	Soil
IOC2349-02	PSZB-26-2 1/2	Soil
IOC2349-03	PSZB-26-5	Soil
IOC2349-04	PSZB-26-7 1/2	Soil
IOC2349-05	PSZB-26-10	Soil
IOC2349-06	PSZB-26-15	Soil
IOC2349-07	PSZB-26-20	Soil
IOC2349-08	PSZB-26-25	Soil
IOC2349-09	PSZB-43-1	Soil
IOC2349-10	PSZB-43-2 1/2	Soil
IOC2349-11	PSZB-43-5	Soil
IOC2349-12	PSZB-43-7 1/2	Soil
IOC2349-13	PSZB-43-10	Soil
IOC2349-14	PSZB-43-15	Soil
IOC2349-15	PSZB-43-20	Soil
IOC2349-16	PSZB-43-25	Soil
IOC2349-17	PSZB-43-30	Soil
IOC2349-18	PSZB-44-1	Soil
IOC2349-19	PSZB-44-2 1/2	Soil
IOC2349-20	PSZB-44-5	Soil
IOC2349-21	PSZB-44-7 1/2	Soil
IOC2349-22	PSZB-44-10	Soil
IOC2349-23	PSZB-44-15	Soil



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Project ID: Aerojet Azusa Geomatrix-Corona 250 East Rincon Street, Suite 204

007190.003.0

Sampled. 03/30/05 Report Number: IOC2349 Received: 03/30/05

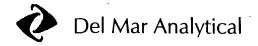
Corona, CA 92879 Attention: Rick Rees

> MATRIX LABORATORY ID **CLIENT ID** IOC2349-24 PSZB-44-20 Soil IOC2349-25 PSZB-44-25 Soil PSZB-44-30 Soil IOC2349-26 IOC2349-27 PSZB-49-1 Soil Soil IOC2349-28 PSZB-49-2 1/2 IOC2349-29 PSZB-49-5 Soil Soil IOC2349-30 PSZB-49-7 1/2 IOC2349-31 PSZB-49-10 Soil IOC2349-32 PSZB-26-30 Soil Soil IOC2349-33 PSZB-49-15 IOC2349-34 PSZB-49-20 Soil IOC2349-35 PSZB-49-25 Soil Soil IOC2349-36 PSZB-49-30

Reviewed By:

Del Mar Analytical, Irvine Chris Roberts For Jim Hatfield

Project Manager



17461Derian Ave , Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92124 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr , Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (888) 505-9689 9830 South 51st St , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Suiset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

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Corona, CA 92879 Attention: Rick Rees Report Number: IOC2349

Sampled: 03/30/05

Received: 03/30/05

INORGANICS

		mon	GAINCS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2349-01 (PSZB-26-1 - Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C30111	0.040	ND	1	3/30/2005	3/30/2005	
Sample ID: IOC2349-02 (PSZB-26-2 1) Reporting Units: mg/kg	,	5000111				3/30/3005	2/20/2005	
Perchlorate Sample ID: IOC2349-03 (PSZB-26-5 - Reporting Units: mg/kg	EPA 314.0 MOD. Soil)	5C30111	0 040	0.086	I	3/30/2005	3/30/2005	
Perchlorate Sample ID: IOC2349-04 (PSZB-26-7 1	EPA 314.0 MOD. /2 - Soil)	5C30111	0.040	ND	1	3/30/2005	3/30/2005	
Reporting Units: mg/kg Perchlorate Sample ID: IOC2349-05 (PSZB-26-10	EPA 314.0 MOD.	5C30111	0.040	0.050	1	3/30/2005	3/31/2005	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C30111	0.040	ND	1	3/30/2005	3/31/2005	
Sample ID: IOC2349-06 (PSZB-26-15 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C30111	0.040	ND	1	3/30/2005	3/31/2005	
Sample ID: 1OC2349-07 (PSZB-26-20 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C30111	0.040	ND	1	3/30/2005	3/31/2005	
Sample ID: IOC2349-08 (PSZB-26-25 Reporting Units: mg/kg		3030111	0.040	ND	1	313012003	3/3/1/2003	
Perchlorate Sample ID: IOC2349-09 (PSZB-43-1 -	EPA 314.0 MOD. Soil)	5C30111	0.040	ND	1	3/30/2005	3/31/2005	
Reporting Units: mg/kg Perchlorate Sample ID: IOC2349-10 (PSZB-43-2 1	EPA 314.0 MOD.	5C30111	0.040	0.49	1	3/30/2005	3/31/2005	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C30111	0.040	0.14	1	3/30/2005	3/31/2005	

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Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

007190.003.0

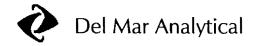
Report Number: IOC2349

Sampled. 03/30/05 Received: 03/30/05

INORGANICS

INORGANICS										
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers		
Sample ID: IOC2349-11 (PSZB-43-5 - Soil Reporting Units: mg/kg										
Perchlorate	EPA 314.0 MOD.	5C30111	0.040	0.13	1	3/30/2005	3/31/2005			
Sample ID: IOC2349-12 (PSZB-43-7 1/2 - Reporting Units: mg/kg	•				_	a 120 120 5	2/21/2005			
Perchlorate	EPA 314.0 MOD.	5C30111	0.040	ND	I	3/30/2005	3/31/2005			
Sample ID: 1OC2349-13 (PSZB-43-10 - So Reporting Units: mg/kg		5030111	0.040	0.050		2/20/2005	2/21/2005			
Perchlorate	EPA 314.0 MOD.	5C30141	0.040	0.058	i	3/30/2005	3/31/2005			
Sample ID: IOC2349-14 (PSZB-43-15 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C30111	0.040	ND	1	3/30/2005	3/31/2005			
C	283									
Sample ID: IOC2349-15 (PSZB-43-20 - So Reporting Units: mg/kg		6030111	0.040) II)	•	2/20/2005	2/21/2005			
Perchlorate	EPA 314.0 MOD.	5C30111	0.040	ND	1	3/30/2005	3/31/2005			
Sample ID: IOC2349-16 (PSZB-43-25 - So Reporting Units: mg/kg	oil)									
Perchlorate	EPA 314.0 MOD.	5C30111	0 040	0.041	1	3/30/2005	3/31/2005			
Sample ID: IOC2349-17 (PSZB-43-30 - So Reporting Units: mg/kg	oil)									
Perchlorate	EPA 314.0 MOD.	5C30111	0.040	0.040	ı	3/30/2005	3/31/2005			
Sample ID: IOC2349-18 (PSZB-44-1 - Soi Reporting Units: mg/kg	l)									
Perchlorate	EPA 314.0 MOD.	5C30111	0.040	ND	1	3/30/2005	3/31/2005			
Sample ID: IOC2349-19 (PSZB-44-2 1/2 -	Soil)									
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C30112	0.040	ND	1	3/30/2005	3/31/2005			
Sample ID: IOC2349-20 (PSZB-44-5 - Soi	il)									
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5C30112	0.040	0.40	l	3/30/2005	3/31/2005			

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Project ID: Aerojet Azusa

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Corona, CA 92879 Attention: Rick Rees

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Report Number: IOC2349

Received: 03/30/05

		INOR	RGANICS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2349-21 (PSZB-44-7 1) Reporting Units: mg/kg Perchlorate	/2 - Soil) EPA 314.0 MOD.	5C30112	0.040	0.13	1	3/30/2005	3/31/2005	
Sample ID: IOC2349-22 (PSZB-44-10 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C30112	0.040	0.071	1	3/30/2005	3/31/2005	
Sample ID: IOC2349-23 (PSZB-44-15 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C30112	0.040	0.052	1	3/30/2005	3/31/2005	
Sample ID: IOC2349-24 (PSZB-44-20 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C30112	0.040	0.29	. 1	3/30/2005	3/31/2005	
Sample ID: 1OC2349-25 (PSZB-44-25 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C30112	0.040	0.39	i	3/30/2005	3/31/2005	
Sample ID: IOC2349-26 (PSZB-44-30 Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5C30112	0.040	0.22	1	3/30/2005	3/31/2005	l
Sample ID: IOC2349-27 (PSZB-49-1 - Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C30112	0.040	0.071	1	3/30/2005	3/31/2005	
Sample ID: IOC2349-28 (PSZB-49-2 1 Reporting Units: mg/kg Perchlorate	/2 - Soil) EPA 314.0 MOD.	5C30112	0.040	0.53	1	3/30/2005	3/31/2005	
Sample ID: IOC2349-29 (PSZB-49-5 - Reporting Units: mg/kg Perchlorate	Soil) EPA 314.0 MOD.	5C30112	- 2.0	16	50	3/30/2005	3/31/2005	
Sample ID: IOC2349-30 (PSZB-49-7) Reporting Units: mg/kg			,					

Del Mar Analytical, Irvine Chris Roberts For Jim Hatfield Project Manager

Perchlorate

0.21

EPA 314.0 MOD. 5C30112 0.040

3/30/2005 3/31/2005



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

Report Number: IOC2349

Sampled: 03/30/05

Received 03/30/05

INORGANICS

		11101	COMMISSION					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2349-31 (PSZB-49-10 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C30112	0.040	0.11	1	3/30/2005	3/31/2005	
Sample ID: IOC2349-32 (PSZB-26-30 - So Reporting Units: mg/kg Perchlorate	ii) EPA 314.0 MOD.	5C30112	0.040	ND	1	3/30/2005	3/31/2005	•
Sample ID: IOC2349-33 (PSZB-49-15 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C30112	0.040	0.067	1	3/30/2005	3/31/2005	
Sample ID: IOC2349-34 (PSZB-49-20 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C30112	0.040	ND	1	. 3/30/2005	. 3/31/2005	
Sample ID: IOC2349-35 (PSZB-49-25 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	5C30112	0.040	ND	1	3/30/2005	3/31/2005	
Sample ID: IOC2349-36 (PSZB-49-30 - So Reporting Units: mg/kg	,					- 10-10-0-		
Perchlorate	EPA 314.0 MOD.	5C30112	0.040	ND	1	3/30/2005	3/31/2005	



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250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID. Aerojet Azusa

007190.003.0

Report Number. IOC2349

Sampled: 03/30/05

Received: 03/30/05

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METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualiflers
Batch: 5C30111 Extracted: 03/30/05										
Blank Analyzed: 03/30/2005 (5C30111-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/30/2005 (5C30111-BS	1)									
Perchlorate	0.518	0.040	mg/kg	0.500		104	85-115			
Matrix Spike Analyzed: 03/30/2005 (5C3	0111-MS1)				Source: I	OC2349-0)1			
Perchlorate	0.522	0 040	mg/kg	0.500	ND	104	80-120			
Matrix Spike Dup Analyzed: 03/30/2005	(5C30111-M	SD1)			Source: I	OC2349-()1			
Perchlorate	0.542	0 040	mg/kg	0 500	ND	108	80-120	4	20	
Batch: 5C30112 Extracted: 03/30/05										
Blank Analyzed: 03/31/2005 (5C30112-E	LK1)									(
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/31/2005 (5C30112-BS	(1)									
Perchlorate	0.516	0.040	mg/kg	0 500		103	85-115			
Matrix Spike Analyzed: 03/31/2005 (5C.	30112-MS1)				Source: I	OC2349-	19			
Perchlorate	0 550	0.040	mg/kg	0 500	ND	110	80-120			
Matrix Spike Dup Analyzed: 03/31/2005	(5C30112-M	SD1)			Source: 1	OC2349-	19			
Perchlorate	0.559	0.040	mg/kg	0 500	ND	112	80-120	2	20	



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DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

RPD Relative Percent Difference



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Certification Summary

Del Mar Analytical, Irvine

Method Matrix Nelac California
EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com

Del Mar Analytical, Irvine Chris Roberts For Jim Hatfield Project Manager



LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa 007190.003.0

Sampled: 03/30/05 Received: 03/31/05

Issued: 04/07/05 17:47

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

IOC2468-03 PSZB-46-1 So IOC2468-04 PSZB-46-2 1/2 So IOC2468-05 PSZB-46-5 So IOC2468-06 PSZB-46-7 1/2 So IOC2468-07 PSZB-46-10 So	RIX
IOC2468-05 PSZB-46-5 Sc IOC2468-06 PSZB-46-7 1/2 Sc IOC2468-07 PSZB-46-10 Sc	oil
IOC2468-06 PSZB-46-7 1/2 So IOC2468-07 PSZB-46-10 So	oil
IOC2468-07 PSZB-46-10 Sc	oil
	oil
	oil
IOC2468-08 PSZB-46-15 Sc	oil
IOC2468-09 PSZB-46-20 Sc	oil
IOC2468-10 PSZB-46-25 Sc	oıl
IOC2468-11 PSZB-46-30 Sc	oil
IOC2468-12 PSZB-42-1 Sc	oıl
IOC2468-13 PSZB-42-2 1/2 So	oıl
IOC2468-14 PSZB-42-5 So	oil
IOC2468-15 PSZB-42-7 1/2 So	oil
IOC2468-16 PSZB-42-10 Sc	oıl
IOC2468-17 PSZB-42-15 . So	oil
IOC2468-18 PSZB-42-20 Sc	oil
IOC2468-19 PSZB-42-25 Sc	oil
IOC2468-20 PSZB-42-30 Se	oıl

Reviewed By:

Del Mar Analytical, Irvine

Jim Hatfield Project Manager



17461Derian Ave , Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr., Suite A, Colton, CA 92324 (909) 370 4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-859 FAX (858) 505-9689 9830 South 51st St., Suite 81-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0681 2520 E Suinset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID. Aerojet Azusa

007190.003.0

Report Number: IOC2468

Sampled: 03/30/05

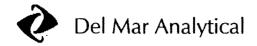
Received: 03/31/05

INORGANICS

		111011	GIALITO					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2468-03 (PSZB-46-1 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5D01077	0.040	ND	1	4/1/2005	4/2/2005	
Sample ID: IOC2468-04 (PSZB-46-2 1/2 - Reporting Units: mg/kg Perchlorate	- Soil) EPA 314.0 MOD.	5D01077	0.040	ND	1	4/1/2005	4/1/2005	
Sample ID: IOC2468-05 (PSZB-46-5 - So Reporting Units: mg/kg		3001077	0.040	ИD	1	4/1/2003	4/1/2003	
Perchlorate Sample ID: IOC2468-06 (PSZB-46-7 1/2	EPA 314.0 MOD Soil)	5D01077	0.040	0.73	1	4/1/2005	4/1/2005	
Reporting Units: mg/kg Perchlorate Sample ID: IOC2468-07 (PSZB-46-10 - S	EPA 314.0 MOD.	5D01077	0.040	0.33	1	4/1/2005	4/1/2005	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5D01077	0.040	0.47	1	4/1/2005	4/1/2005	
Sample ID: IOC2468-08 (PSZB-46-15 - S Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5D01077	0.20	1.8	5	4/1/2005	4/2/2005	
Sample ID: 10C2468-09 (PSZB-46-20 - S Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5D01077	0.40	3.7	10	4/1/2005	4/2/2005	
Sample ID: IOC2468-10 (PSZB-46-25 - S Reporting Units: mg/kg		5D01033	0.040	0.16		4/1/2005	444,0005	
Perchlorate Sample ID: IOC2468-11 (PSZB-46-30 - S Reporting Units: mg/kg	EPA 314.0 MOD.	5D01077	0.040	0.16	1	4/1/2005	4/1/2005	
Perchlorate Sample ID: IOC2468-12 (PSZB-42-I - So	EPA 314.0 MOD.	5D01077	0.040	0.050	1	4/1/2005	4/1/2005	1
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5D01077	0.080	0.99	2	4/1/2005	4/2/2005	

Del Mar Analytical, Irvine

Jim Hatfield Project Manager



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IOC2468

Sampled: 03/30/05 Received: 03/31/05

INORGANICS

INORGANICS											
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers			
Sample ID: IOC2468-13 (PSZB-42-2 1/2 - Reporting Units: mg/kg	Soil)										
Perchlorate	EPA 314.0 MOD.	5D01077	0 040	ND	1	4/1/2005	4/1/2005				
Sample ID: 1OC2468-14 (PSZB-42-5 - Soi Reporting Units: mg/kg	il)										
Perchlorate	EPA 314.0 MOD.	5D01077	0.040	ND	1	4/1/2005	4/1/2005				
Sample ID: IOC2468-15 (PSZB-42-7 1/2 - Reporting Units: mg/kg	Soil)										
Perchlorate	EPA 314.0 MOD.	5D01077	0.040	ND	1	4/1/2005	4/1/2005				
Sample ID: IOC2468-16 (PSZB-42-10 - Se Reporting Units: mg/kg	oil)										
Perchlorate	EPA 314.0 MOD.	5D01077	0.040	ND	1	4/1/2005	4/1/2005				
Sample ID: IOC2468-17 (PSZB-42-15 - Se Reporting Units: mg/kg	oil)										
Perchlorate	EPA 314.0 MOD.	5D01077	0.040	ND	1	4/1/2005	4/1/2005				
Sample ID: IOC2468-18 (PSZB-42-20 - S Reporting Units: mg/kg	oil) ·										
Perchlorate	EPA 314.0 MOD.	5D01077	0.040	ND	1	4/1/2005	4/1/2005				
Sample ID: IOC2468-19 (PSZB-42-25 - S Reporting Units: mg/kg	oil)										
Perchlorate	EPA 314.0 MOD.	5D01077	0.040	ND	i	4/1/2005	4/2/2005				
Sample ID: IOC2468-20 (PSZB-42-30 - S Reporting Units: mg/kg	oil)										
Perchlorate	EPA 314.0 MOD.	5D01077	0.040	ND	1	4/1/2005	4/2/2005				



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Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.003.0

Report Number: IOC2468

Sampled: 03/30/05

Received: 03/31/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	l Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
	Kesun	Linux	Onics	Devei	Kesuit	MEC	Limits	KI D	Limit	Quanners
Batch: 5D01077 Extracted: 04/01/05										
Blank Analyzed: 04/01/2005 (5D01077-B	LKI)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 04/01/2005 (5D01077-BS	1)									
Perchlorate	0.547	0 040	mg/kg	0.500		109	85-115			
Matrix Spike Analyzed: 04/01/2005 (5D0	1077-MS1)				Source: I	OC2468-0	3			
Perchlorate	0 574	0.040	mg/kg	0.500	ND	115	80-120			•
Matrix Spike Dup Analyzed: 04/01/2005	(5D01077-MSI	01)			Source: I	OC2468-0	3			
Perchlorate	0 581	0.040	mg/kg	0.500	ND	116	80-120	1	20	



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Geomatrix-Corona

Project ID. Aerojet Azusa

007190.003.0

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

ND

Report Number: IOC2468

Sampled: 03/30/05

Received: 03/31/05

DATA QUALIFIERS AND DEFINITIONS

Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

Corona, CA 92879 Attention: Rick Rees Report Number: IOC2468

Sampled. 03/30/05

Received: 03/31/05

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Nelac California Method Matrix EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

#414

	Cha	in-of-Custody R	ecor	d					1	21	1 5		_7_	/'				T_{c}	Date 3	3 - 3/	0-05 - 3-31-05 Page 0f Z
Project No · 7			T							ANAL				***************************************					Т		REMARKS
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3-30-05	1653	PSZB-49-40	S								X								_	1	
3-31-05	1256	PSZB-46-1	S									X							-)	
3-31-05	1301	PSZB-46-21/2	S									X							_	1	
3-31-as		P528-46-5	S									X							_	1	
3-31-05	1313	PSZB-46-7/2	5									X							_	1	LIMITED SIMPLE VOLUME
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		PSZB-46-20	S									X								1	
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JUTHET 2'C

	Cha	in-of-Cust	ody R	ecor	t					1	21	16	<u>; </u>								Date	3-	31-95 Page 2 of 2
Project No .	7190.	003									ANAL	YSES									T		REMARKS
Samplers (Sign	atures!	>		Soil (S), Water (V/), Vapor (V), or Other	EPA Method 8270	8015	8015				Aetais		FOR 314									0	Additional Comments
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		PSZB -42		5									X									- 1	
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17461Derian Ave., Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-856 FAX (858) 505-856 PAX (858) 505-856 SO 5040 FAX (858) 505-856 SO 5040 FAX (858) 505-856 SO 5040 FAX (858) 785 0043 FAX (480) 785 0851 2520 E Suinset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3620

LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa 007190.003.0

Sampled: 04/01/05 Received: 04/01/05

Issued: 04/12/05 09:48

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOD0085-01	PSZB-41-1	Soil
IOD0085-02	PSZB-41-2 1/2	Soil
IOD0085-03	PSZB-41-5	Soil
IOD0085-04	PSZB-41-7 1/2	Soil
IOD0085-05	PSZB-41-10	Soil
IOD0085-06	PSZB-41-15	Soil
IOD0085-07	PSZB-41-20	Soil
IOD0085-08	PSZB-41-25	Soil
IOD0085-09	PSZB-41-30	Soil
1OD0085-10	PSZB-47-1	Soil
IOD0085-11	PSZB-47-2 1/2	Soil
IOD0085-12	PSZB-47-5	Soil
IOD0085-13	PSZB-47-7 1/2	Soil
IOD0085-14	PSZB-47-10	Soil
IOD0085-15	PSZB-47-15	Soil
IOD0085-16	PSZB-47-20	Soil
IOD0085-17	PSZB-47-25	Soil
IOD0085-18	PSZB-47-30	Soil

Reviewed By:

Del Mar Analytical, Irvine

Jim Hatfield Project Manager



17461Denan Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr., Suite A, Colton, CA 92324 (909) 370 4667 FAX (949) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-869 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0831 FAX (480) 785-0851 2520 E Suinset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Attention: Rick Rees

Prote

Project ID: Aerojet Azusa

007190.003.0

250 East Rincon Street, Suite 204
Corona, CA 92879 Repo

Report Number: IOD0085

Sampled: 04/01/05

Received: 04/01/05

INORGANICS

Analyte	Method	Batch	Reporting · Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0085-01 (PSZB-41-1 - Soil) Reporting Units: mg/kg	ı			Sampled:	04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	ND	1	4/2/2005	4/4/2005	
Sample ID: IOD0085-02 (PSZB-41-2 1/2 - S Reporting Units: mg/kg	Soil)			Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	ND	1	4/2/2005	4/4/2005	
Sample ID: IOD0085-03 (PSZB-41-5 - Soil) Reporting Units: mg/kg)			Sampled	04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	ND	1	4/2/2005	4/4/2005	
Sample ID: IOD0085-04 (PSZB-41-7 1/2 - S Reporting Units: mg/kg	Soil)			Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	ND	1	4/2/2005	4/5/2005	
Sample ID: IOD0085-05 (PSZB-41-10 - Soi Reporting Units: mg/kg	il)			Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	ND	1	4/2/2005	4/4/2005	
Sample ID: 1OD0085-06 (PSZB-41-15 - Soi Reporting Units: mg/kg	il)			Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	ND	l	4/2/2005	4/4/2005	
Sample ID: IOD0085-07 (PSZB-41-20 - Soil Reporting Units: mg/kg	il)		,	Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	ND	1	4/2/2005	4/4/2005	
Sample ID: IOD0085-08 (PSZB-41-25 - Soi Reporting Units: mg/kg	ii)			Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	ND	1	4/2/2005	4/4/2005	
Sample ID: IOD0085-09 (PSZB-41-30 - Soil Reporting Units: mg/kg	ii)			Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	ND	1	4/2/2005	4/5/2005	
Sample ID: IOD0085-10 (PSZB-47-1 - Soil Reporting Units: mg/kg)			Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.080	1.1	2	4/2/2005	4/5/2005	



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Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.003.0

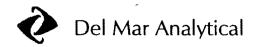
Report Number: IOD0085

Sampled: 04/01/05

Received: 04/01/05

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0085-11 (PSZB-47-2 1/2 -	Soil)			Sampled	: 04/01/05			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5D02045	0.20	1.8	5	4/2/2005	4/5/2005	
Sample ID: IOD0085-12 (PSZB-47-5 - Soil Reporting Units: mg/kg))			Sampled	: 04/01/05			
Perchlorate .	EPA 314.0 MOD.	5D02045	0.20	1.5	5	4/2/2005	4/5/2005	
Sample ID: IOD0085-13 (PSZB-47-7 1/2 - Reporting Units: mg/kg	Soil)			Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	0.26	1	4/2/2005	4/5/2005	
Sample ID: 10D0085-14 (PSZB-47-10 - So	il)	•		Sampled	: 04/01/05			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5D02045	0.040	0.33	1	4/2/2005	4/5/2005	
Sample ID: IOD0085-15 (PSZB-47-15 - So Reporting Units: mg/kg	oil)			Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	0.18	1	4/2/2005	4/5/2005	
Sample ID: IOD0085-16 (PSZB-47-20 - So Reporting Units: mg/kg	oil)			Sampled	: 04/01/05			
Perchlorate Perchlorate	EPA 314.0 MOD.	5D02045	0.040	0.12	1	4/2/2005	4/5/2005	
Sample ID: 1OD0085-17 (PSZB-47-25 - So Reporting Units: mg/kg	oil)			Sampled	: 04/01/05			
Perchlorate	EPA 314.0 MOD.	5D02045	0.040	0.43	1	4/2/2005	4/5/2005	
Sample ID: IOD0085-18 (PSZB-47-30 - So	oil)			Sampled	l: 04/01/05			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	5D02045	0.040	0.24	1	4/2/2005	4/5/2005	



17461Denan Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370 1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 £ Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID. Aerojet Azusa

250 East Rincon Street, Suite 204 Corona, CA 92879

007190.003.0 Report Number: IOD0085

Sampled: 04/01/05

Received: 04/01/05

Attention: Rick Rees

METHOD BLANK/QC DATA

INORGANICS

Analyte	I Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D02045 Extracted: 04/02/05										
Blank Analyzed: 04/04/2005 (5D02045-B	LK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 04/04/2005 (5D02045-BS	1) ·									
Perchlorate	0.498	0 040	mg/kg	0.500		100	85-115			
Matrix Spike Analyzed: 04/04/2005 (5D0	2045-MS1)				Source: I	OD0085-0	1			
Perchlorate	0.510	0 040	mg/kg	0.500	ND	102	80-120			
Matrix Spike Dup Analyzed: 04/04/2005	(5D02045-MSI	D1)			Source: I	OD0085-0	1			
Perchlorate	0 529	0 040	mg/kg	0.500	ND	106	80-120	4	20	



17461Denan Ave , Suite 100, Imme, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 £ Cooley Dr , Suite A, Colton, CA 92324 (909) 370 4667 FAX (949) 370-1046 9484 Chesapeake Dr , Suite 805, San Diego, CA 92123 (858) 505-856 FAX (858) 505-8569 9830 South 51s St , Suite B-120, Phoenix, AZ 85044 (480) 785-0031 FAX (480) 785-0031 2520 E Suinset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.003.0

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

Report Number: IOD0085

Sampled: 04/01/05 Received: 04/01/05

DATA QUALIFIERS AND DEFINITIONS

ND

Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD

Relative Percent Difference

ADDITIONAL COMMENTS

For GRO (C4-C12):

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

For Extractable Fuel Hydrocarbons (EFH, DRO, ORO):

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.



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Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.003.0

Corona, CA 92879 Attention: Rick Rees Report Number: IOD0085

Sampled: 04/01/05

Received: 04/01/05

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	N/A

Nevada and NELAP provide analyte specific accreditations Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www dmalabs.com



FEBRUARY AND MARCH 2006 SAMPLING



LABORATORY REPORT

Prepared For: Geomatrix-Corona

Geomatrix-Corona Project: Aerojet Azusa

250 East Rincon Street, Suite 204 007190.004.17

Corona, CA 92879
Attention: Rick Rees Sampled: 02/07/06

Received: 02/07/06 Issued: 02/20/06 12:04

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NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 5°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Perchlorate result of water sample IPB0657-01 is included in this report. All other results were sent under

separate cover.

SUBCONTRACTED. No analyses were subcontracted to an outside laboratory.

LABORATORY ID CLIENT ID

IPB0657-01 20060207EQB

Reviewed By:

Del Mar Analytical, Irvine

Patty Mata Project Manager **MATRIX**

Water



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Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.17

Sampled. 02/07/06

Corona, CA 92879

Report Number: IPB0657

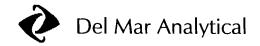
Received. 02/07/06

Attention: Rick Rees

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB0657-01 (20060207EQB - Wat	er)							
Reporting Units: ug/l								
Perchlorate	EPA 314.0	6B09066	3 0	ND	1	2/9/2006	2/10/2006	

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Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.17

Report Number: IPB0657

Sampled: 02/07/06

Received: 02/07/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	I Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B09066 Extracted: 02/09/06										
Blank Analyzed: 02/09/2006 (6B09066-B	LKI)									
Perchlorate	ND	3.0	ug/l							
LCS Analyzed: 02/09/2006 (6B09066-BS	1)	-								
Perchlorate	47.3	3.0	ug/l	50.0		95	85-115			
Matrix Spike Analyzed: 02/09/2006 (6B0	9066-MS1)				Source: I	PB0781-0	3			
Perchlorate	52 0	3.0	ug/l	50 0	2 2	100	80-120			
Matrix Spike Dup Analyzed: 02/09/2006	(6B09066-MSI	D1)			Source: I	PB0781-0	3			
Perchlorate	52 3	3.0	ug/l	50 0	2 2	100	80-120	1	20	



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9830 South 51st St , Suite B-120, Phoenix, AZ 85044 (480) 785 0043 FAX (480) 785 0851
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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.17

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

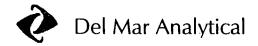
Report Number: IPB0657

Sampled: 02/07/06 Received: 02/07/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st 5t., Suite B-120, Phoenix, AZ 85044 (480) 785 0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.17

Certification Summary

Corona, CA 92879 Attention: Rick Rees Report Number: IPB0657

Sampled: 02/07/06

Received: 02/07/06

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method	Matrix	Nelac	California
EPA 314.0	Water	N/A	x

Nevada and NELAP provide analyte specific accreditations Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www dmalabs com.

COR -10104

PROJECT NAME		DATE: 62 /67/C 6. PAGE OF
PROJECT NUMBER - 40 CC 4 1.7	LABORATORY NAME DEL WAR CLIENT INFORMATION REJET - A I SA	REPORTING REQUIREMENTS
RESULTS TO G. RICHARD REES	LABORATORY NAME DEL MAR LABORATORY ADDRESS 17461 DEKIAN STE 180	IPB0657
TURNAROUND TIME STANDARD	IRVINE A 126/4	
. SAMPLE SHIPMENT METHOD	LABORATORY CONTACT FATTI MATTA	GEOTRACKER REQUIRED YES (NO
CCURTER	LABORATORY PHONE NUMBER 149- 261-1022	SITE SPECIFIC GLOBAL ID NO
SAMPLERS (SIGNATURE):	ANALYSES	
SAIVIFLERS (SIGNATURE).		0
KA 75		Type
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2/7/66 9:33 2006010 7EQB		2 470ML W X 1
2/7/66 9:59 FIZB-04-01	X GLASS	
2/7/06 10:57 PIZB-04-272 2,5		II S X I
2/7/06 11:11 PIZO-04-5	$\frac{1}{x}$	() S X 1
3/7/06 11:17 PIZB-04-7.5		(1 S X 1
2/7/06 11:30 PIZB-04-16		" 8 K I
2/7/06 11:40 PIZB-04-15	$\frac{1}{x}$	1 5 6 1
2/7/06 11:49 PIZB-04-20		" S X I
2/7/06 12:01 PIZB-04-25		. 3 1
217/06 12:13 PIZB-04-30	X I I I I I I I I I I I I I I I I I I I	11 S X 1
2/7/06 12:17 PIZB-C4-35		11 S X I
217/06 13:04 PIZB-04-40		S X I S-DAY TURMAROUND
2/7/06 13:28 PIZB-D4-45	XX	11 S X I S-DAY TURNARBULD
2/7/06 14:03 PIZB-04-50	XX	11 S X 1 5-DAY TURNAROUND
2/7/06 16:28 PSZB-60-1	x	(1 S X I
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SIGNATURE:	SIGNATURE	Street, Suite 204
PRINTED NAME:		mia 92879-1363 Geomatrix
COMPANY.	COMPANY. Tel 951.273.7400	Fax 951.273.7420



LABORATORY REPORT

Prepared For: Geomatrix-Corona Project: Aerojet Azusa

250 East Rincon Street, Suite 204 007190.004.17

Corona, CA 92879 Attention: Rick Rees

Sampled: 02/07/06 Received: 02/07/06 Issued: 02/14/06 17:17

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 5°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Perchlorate result of water sample IPB0657-01 was not yet available for reporting and will be sent under

separate cover. Report revised 2/14/06 to correct sample ID for lab number IPB0657-15.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB0657-02	PIZB-04-01	Soil
IPB0657-03	PIZB-04-2.5	Soil
IPB0657-04	PIZB-04-5	Soil
IPB0657-05	PIZB-04-7.5	Soil
IPB0657-06	PIZB-04-10	Soil
IPB0657-07	PIZB-04-15	Soil
IPB0657-08	PIZB-04-20	Soil
IPB0657-09	PIZB-04-25	Soil
IPB0657-10	PIZB-04-30	Soil



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Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204 Corona, CA 92879

007190.004.17

Sampled: 02/07/06

Report Number: IPB0657

Received: 02/07/06

Attention: Rick Rees

LABORATORY ID	CLIENT ID	MATRIX
IPB0657-11	PIZB-04-35	Soil
IPB0657-12	PIZB-04-40	Soil
IPB0657-13	PIZB-04-45	Soil
IPB0657-14	PIZB-04-50	Soil
IPB0657-15	PSZB-60-1	Soil

Reviewed By:

Del Mar Analytical, Irvine

Patty Mata

Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full-without written permission from Del Mar Analytical.

IPB0657 < Page 2 of 7>



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

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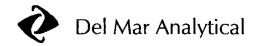
Report Number: IPB0657

Sampled: 02/07/06 Received: 02/07/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB0657-02 (PIZB-04-01 - Soil) Reporting Units: mg/kg				Sampled:	02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	ND	0.998	2/9/2006	2/9/2006	
Sample ID: IPB0657-03 (PIZB-04-2.5 - Soil) Reporting Units: mg/kg)			Sampled:	02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0 040	ND	0.998	2/9/2006	2/9/2006	
Sample ID: IPB0657-04 (PIZB-04-5 - Soil) Reporting Units: mg/kg				Sampled:	02/07/06			
Perchlorate	EPA 314.0 MOD	6B09098	0.040	0.044	0.998	2/9/2006	2/9/2006	
Sample ID: IPB0657-05 (PIZB-04-7.5 - Soil Reporting Units: mg/kg				Sampled	: 02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	ND	0.998	2/9/2006	2/9/2006	
Sample ID: IPB0657-06 (PIZB-04-10 - Soil) Reporting Units: mg/kg	1			Sampled	: 02/07/06			
Perchlorate,	EPA 314.0 MOD.	6B09098	0.040	ND	0.998	2/9/2006	2/9/2006	
Sample ID: IPB0657-07 (PIZB-04-15 - Soil) Reporting Units: mg/kg)			Sampled	: 02/07/06			
Perchlorate	EPA 314 0 MOD.	6B09098	0.040	ND	0.998	2/9/2006	2/9/2006	
Sample ID: IPB0657-08 (PIZB-04-20 - Soil) Reporting Units: mg/kg)			Sampled	: 02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	ND	1	2/9/2006	2/9/2006	
Sample ID: IPB0657-09 (PIZB-04-25 - Soil) Reporting Units: mg/kg)			Sampled	: 02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	0.072	0.995	2/9/2006	2/9/2006	
Sample ID: IPB0657-10 (PIZB-04-30 - Soil Reporting Units: mg/kg)			Sampled	: 02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	0.25	1	2/9/2006	2/10/2006	
Sample ID: IPB0657-11 (PIZB-04-35 - Soil Reporting Units: mg/kg)			Sampled	: 02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	0.15	0.998	2/9/2006	2/10/2006	





Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.17

Corona, CA 92879 Attention: Rick Rees Report Number: IPB0657

Sampled: 02/07/06 Received: 02/07/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB0657-12 (PIZB-04-40 - Soil Reporting Units: mg/kg)			Sampled	: 02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	0.076	0.998	2/9/2006	2/10/2006	
Sample ID: IPB0657-13 (PIZB-04-45 - Soil Reporting Units: mg/kg)			Sampled	: 02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	0.19	0.998	2/9/2006	2/10/2006	
Sample ID: IPB0657-14 (PIZB-04-50 - Soil Reporting Units: mg/kg)			Sampled	: 02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	0.22	1	2/9/2006	2/10/2006	
Sample ID: IPB0657-15 (PSZB-60-1 - Soil) Reporting Units: mg/kg	•			Sampled	: 02/07/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	ND	1	2/9/2006	2/10/2006	



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees

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Project ID Aerojet Azusa

007190.004.17

Report Number: IPB0657

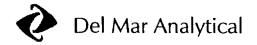
Sampled: 02/07/06

Received: 02/07/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B09098 Extracted: 02/09/06										
Blank Analyzed: 02/09/2006 (6B09098-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 02/09/2006 (6B09098-BS	1)									
Perchlorate	0.493	0.040	mg/kg	0.500		99	85-115			
Matrix Spike Analyzed: 02/10/2006 (6B0	9098-MS1)				Source: I	PB0657-1	2			
Perchlorate	0 565	0 040	mg/kg	0.498	0.076	98	80-120			
Matrix Spike Dup Analyzed: 02/10/2006	(6B09098-M	ISD1)			Source: 1	PB0657-1	2			
Perchlorate	0.557	0.040	mg/kg	0 498	0.076	97	80-120	1	20	



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.17

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

007190.00

Report Number: IPB0657

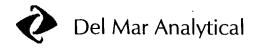
Sampled: 02/07/06

Received: 02/07/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Derian Ave., Suite 100, Imne, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st 5t , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204 Corona, CA 92879

007190.004.17

Sampled: 02/07/06

Attention: Rick Rees

Report Number: IPB0657

Received: 02/07/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	Californi
EPA 314.0 MOD.	Soil	N/A	N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www dmalabs com.

PROJECT	NAME																DATE: 6.2	167	10	Ŀ	P/	AGE	1	OF
PROJECT NUM	BER - 4/C	, i (u),	7		LAB	BORAT	ORY NA	ME AL	1P		CL	ENT IN	FORMAT	ION	MACJET -	-AISA	REPORTING R	EQUIRE	EMENT	S				
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COMPANY.	***************************************		1		CON	/PAN	Y.							Tel 951,273,7400 Fax 951,273,7420										



LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

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Sampled: 02/08/06-02/09/06

Received: 02/09/06 Issued: 02/23/06 09:37

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS. No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB0946-01	PSZB-64-5	Soil
IPB0946-02	PSZB-64-1	Soil
IPB0946-03	PSZB-64-2.5	Soil
IPB0946-04	PSZB-64-7.5	Soil
IPB0946-05	PSZB-64-10	Soil
IPB0946-06	PSZB-64-15	Soil
IPB0946-07	PSZB-64-20	Soil
IPB0946-08	PSZB-64-25	Soil
IPB0946-09	PSZB-64-30	Soil
IPB0946-10	PSZB-64-35	Soil
IPB0946-11	PSZB-64-40	Soil





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Project ID: Aerojet Azusa

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1.7 Sampled: 02/08/06-02/09/06

Report Number: IPB0946 Received: 02/09/06

LABORATORY ID	CLIENT ID	MATRIX
IPB0946-12	PSZB-63-1	Soil
IPB0946-13	PSZB-63-2.5	Soil
IPB0946-14	PSZB-62-2.5	Soil
IPB0946-15	PSZB-62-1	Soil
IPB0946-16	PSZB-63-6	· Soil
IPB0946-17	PSZB-63-7.5	Soil
IPB0946-18	PSZB-63-10	Soil
IPB0946-19	PSZB-63-15	Soil
IPB0946-20	PSZB-63-20	Soil
IPB0946-21	PSZB-63-25	Soil
IPB0946-22	PSZB-61-2.5	Soil
IPB0946-23	PSZB-61-1	Soil
IPB0946-24	PSZB-63-30	Soil
IPB0946-25	PSZB-63-35	Soil
IPB0946-26	PSZB-63-40	Soil
IPB0946-27	PSZB-55-5	Soil
IPB0946-28	PSZB-55-2 5	Soil
IPB0946-29	PSZB-55-1	Soil
IPB0946-30	PSZB-62-5	Soil
IPB0946-31	PSZB-62-7.5	Soil
IPB0946-32	PSZB-62-10	Soil
IPB0946-33	PSZB-62-15	Soil
1PB0946-34	PSZB-62-20	Soil
IPB0946-35	PSZB-62-25	Soil

Reviewed By:

Del Mar Analytical, Irvine

Patty Mata Project Manager



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Report Number: IPB0946

Sampled: 02/08/06-02/09/06

Received. 02/09/06

INORGANICS

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Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: IPB0946-01 (PSZB-64-5 - Soil) Reporting Units: mg/kg				Sampled	: 02/08/06				
Perchlorate	EPA 314.0 MOD.	6B13090	0.040	ND	0.998	2/13/2006	2/16/2006		
Sample ID: IPB0946-02 (PSZB-64-1 - Soil) Reporting Units: mg/kg				Sampled	: 02/08/06				
Perchlorate	EPA 314.0 MOD.	6B13090	0.040	ND	0.995	2/13/2006	2/16/2006		
Sample ID: IPB0946-03 (PSZB-64-2.5 - Soil Reporting Units: mg/kg))			Sampled	: 02/08/06				
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	1	2/13/2006	2/13/2006		
Sample ID: IPB0946-04 (PSZB-64-7.5 - Soil Reporting Units: mg/kg))			•	: 02/09/06				
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	1	2/13/2006	2/14/2006		
Sample ID: IPB0946-05 (PSZB-64-10 - Soil Reporting Units: mg/kg)			Sampled	: 02/09/06				
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	0.998	2/13/2006	2/14/2006		
Sample ID: IPB0946-06 (PSZB-64-15 - Soil Reporting Units: mg/kg)			Sampled	1: 02/09/06				
Perchlorate ,	EPA 314.0 MOD.	6B13120	0.040	ND	0.998	2/13/2006	2/14/2006		
Sample ID: IPB0946-07 (PSZB-64-20 - Soil Reporting Units: mg/kg)			Sampled	l: 02/09/06	•			
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	0.998	2/13/2006	2/14/2006		
Sample ID: IPB0946-08 (PSZB-64-25 - Soil Reporting Units: mg/kg)			Sampled	1: 02/09/06				
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	0.995	2/13/2006	2/14/2006		
Sample ID: IPB0946-09 (PSZB-64-30 - Soil Reporting Units: mg/kg	l)			Sampleo	1: 02/09/06				
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	1	2/13/2006	2/14/2006		
Sample ID: IPB0946-10 (PSZB-64-35 - Soi	1)			Sample	1: 02/09/06				
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	1	2/13/2006	2/14/2006		

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Patty Mata Project Manager



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Received: 02/09/06

INORGANICS

MORGANICS								
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB0946-11 (PSZB-64-40 - Soil) Reporting Units: mg/kg)			Sampled	: 02/09/06		٠	
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	0.998	2/13/2006	2/14/2006	
Sample ID: IPB0946-12 (PSZB-63-1 - Soil) Reporting Units: mg/kg				Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD	6B13120	0.040	ND	0.998	2/13/2006	2/14/2006	
Sample ID: IPB0946-13 (PSZB-63-2.5 - Soil Reporting Units: mg/kg	1)			Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	0.053	0.998	2/13/2006	2/14/2006	
Sample ID: IPB0946-14 (PSZB-62-2.5 - Soil Reporting Units: mg/kg				•	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B13120	0.80	8.8	20	2/13/2006	2/14/2006	
Sample ID: IPB0946-15 (PSZB-62-1 - Soil) Reporting Units: mg/kg				Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B13120	0.40	1.6	9.98	2/13/2006	2/14/2006	
Sample ID: IPB0946-16 (PSZB-63-6 - Soil) Reporting Units: mg/kg				Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	1	2/13/2006	2/14/2006	
Sample ID: IPB0946-17 (PSZB-63-7.5 - Soi Reporting Units: mg/kg	1) -			Sampled	: 02/09/06		•	
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	1	2/13/2006	2/14/2006	
Sample ID: IPB0946-18 (PSZB-63-10 - Soil Reporting Units: mg/kg)			Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	0.995	2/13/2006	2/14/2006	
Sample ID: IPB0946-19 (PSZB-63-15 - Soil Reporting Units: mg/kg	1)			Sampled	1: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	0.995	2/13/2006	2/14/2006	
Sample ID: IPB0946-20 (PSZB-63-20 - Soil Reporting Units: mg/kg	1)			Sampled	1: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	1	2/13/2006	2/14/2006	

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Patty Mata Project Manager 

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Received: 02/09/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB0946-21 (PSZB-63-25 - Soil) Reporting Units: mg/kg				Sampled:	02/09/06			
Perchlorate-	EPA 314.0 MOD.	6B13120	0.040	ND	0.993	2/13/2006	2/14/2006	
Sample ID: IPB0946-22 (PSZB-61-2.5 - Soil Reporting Units: mg/kg)			Sampled:	02/09/06			
Perchlorate	EPA 314.0 MOD.	6B13120	0.040	ND	l	2/13/2006	2/14/2006	
Sample ID: IPB0946-23 (PSZB-61-1 - Soil) Reporting Units: mg/kg				Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B14119	0.040	0.14	0.998	2/14/2006	2/14/2006	
Sample ID: IPB0946-24 (PSZB-63-30 - Soil) Reporting Units: mg/kg)			Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	0.995	2/14/2006	2/14/2006	
Sample ID: IPB0946-25 (PSZB-63-35 - Soil) Reporting Units: mg/kg)			Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	0.998	2/14/2006	2/14/2006	
Sample ID: IPB0946-26 (PSZB-63-40 - Soil Reporting Units: mg/kg)			Sampled	: 02/09/06			
Perchlorate	EPA 314 0 MOD.	6B14119	0.040	ND	0.998	2/14/2006	2/14/2006	
Sample ID: IPB0946-27 (PSZB-55-5 - Soil) Reporting Units: mg/kg				Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	0.995	2/14/2006	2/14/2006	
Sample ID: IPB0946-28 (PSZB-55-2.5 - Soi Reporting Units: mg/kg	1)			Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	0.995	2/14/2006	2/14/2006	
Sample ID: IPB0946-29 (PSZB-55-1 - Soil) Reporting Units: mg/kg				Sampled	: 02/09/06			
Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	0.998	2/14/2006	2/15/2006	
Sample ID: IPB0946-30 (PSZB-62-5 - Soil) Reporting Units: mg/kg	•			Sampled	l: 02/09/06			
Perchlorate Perchlorate	EPA 314.0 MOD.	6B14119	0.040	0.35	0 998	2/14/2006	2/15/2006	





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Received: 02/09/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB0946-31 (PSZB-62-7.5 - So	ii) [.]			Sampled	02/09/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B14119	0.040	0.14	0.995	2/14/2006	2/15/2006	
Sample ID: IPB0946-32 (PSZB-62-10 - Soi	1)			Sampled	: 02/09/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	0.998	2/14/2006	2/15/2006	
Sample ID: IPB0946-33 (PSZB-62-15 - Soi	i)			Sampled	: 02/09/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	0.998	2/14/2006	2/16/2006	
Sample ID: IPB0946-34 (PSZB-62-20 - Soi		0014117	0.040		: 02/09/06	2/14/2000	2,10,200	
Reporting Units: mg/kg	•			•				
Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	1	2/14/2006	2/15/2006	
Sample ID: IPB0946-35 (PSZB-62-25 - Soi	l)			Sampled	: 02/09/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	1	2/14/2006	2/15/2006	

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METHOD BLANK/QC DATA

INORGANICS

•		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B13090 Extracted: 02/13/06										
Blank Analyzed: 02/14/2006 (6B13090-B	LK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 02/14/2006 (6B13090-BS	51)									
Perchlorate	0.481	0.040	mg/kg	0 500		96	85-115			
Matrix Spike Analyzed: 02/14/2006 (6B)	13090-MS1)				Source: I	PB0808-2	7			
Perchlorate	0 495	0.040	mg/kg	0 498	ND	99	80-120			
Matrix Spike Dup Analyzed: 02/14/2006	(6B13090-M	ISD1)			Source: I	PB0808-2	7			
Perchlorate	0 513	0 040	mg/kg	0 500	ND	103	80-120	4	20	
Batch: 6B13120 Extracted: 02/13/06										
Blank Analyzed: 02/13/2006 (6B13120-F	BLK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 02/13/2006 (6B13120-BS	S1)									
Perchlorate	0.474	0 040	mg/kg	0.500		95	85-115			
Matrix Spike Analyzed: 02/13/2006 (6B	13120-MS1)				Source: l	PB0946-0	3			
Perchlorate	0.511	0.040	mg/kg	0.499	ND	102	80-120			
Matrix Spike Dup Analyzed: 02/13/2000	6 (6B13120-M	1SD1)			Source: l	PB0946-0	13			
Perchlorate	0.506	0 040	mg/kg	0 499	ND	101	80-120	1	20	
Batch: 6B14119 Extracted: 02/14/06									•	
Blank Analyzed: 02/14/2006 (6B14119-I	BLK1)									
Perchlorate	ND	0.040	mg/kg							

Del Mar Analytical, Irvine Patty Mata

Project Manager



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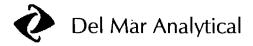
Corona, CA 92879 Attention: Rick Rees

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METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B14119 Extracted: 02/14/06										
LCS Analyzed: 02/14/2006 (6B14119-BS	51)									
Perchlorate	0.510	0 040	mg/kg	0 500		102	85-115			
Matrix Spike Analyzed: 02/14/2006 (6B	14119-MS1)				Source: I	PB0946-2	3			
Perchlorate	0 710	0.040	mg/kg	0.499	0 14	114	80-120			
Matrix Spike Dup Analyzed: 02/14/2006	6 (6B14119-M	ISD1)			Source: I	PB0946-2	3			
Perchlorate	0 699	0.040	mg/kg	0 499	0 14	112	80-120	2	20	



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
9830 South 51st St , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

ricrojet rizusu

250 East Rincon Street, Suite 204

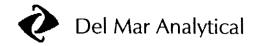
007190.004.1.7 Report Number: IPB0946 Sampled: 02/08/06-02/09/06

Corona, CA 92879 Attention: Rick Rees Received: 02/09/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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2520 E. Suiset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID. Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB0946

Sampled: 02/08/06-02/09/06

Received: 02/09/06

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method

Nelac

N/A

California

EPA 314.0 MOD.

Soil

N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

IPB0946,

COR 10108

CHAIN-OF-CUSTODY RECORD DATE: 19/06 PROJECT NAME. AEROSET-AISA PERKINELMER AOC PAGE / LABORATORY, NAME DEL MAR PROJECT NUMBER. 7190,004 1.7 CLIENT INFORMATION AEROJET-AISA LABORATORY ADDRESS 17461 DERTAN STE 100 IRVINE CA 92614 PATTE MATA SAMPLE SHIPMENT METHOD (NO) GEOTRACKER REQUIRED YES COURTER 149-261-102 SITE SPECIFIC GLOBAL ID NO **ANALYSES** SAMPLERS (SIGNATURE): 3.4 of Cont MS/MSD SAMPLE EPA CONTAINER ADDITIONAL TIME NUMBER TYPE AND SIZE DATE COMMENTS 2/8/06 17:08 PSZB-64-5 X GLASS 402 X X 2/8/06 17:09 PSZB-64-1 GLASS 402 S X 5 X 17:10 PSZB-64-2.5 1.1 11 2/9/06 7:06 12528-64-7.5 11 X -11 2/9/06 7:18 7528-64-10 11 X 1 11 219106 8:25 PSZB-64-15 X 10 5 X ı 219106 8:21 PYEB-64-20 X X . . l t X 2 KI/CG 8-27 18:528-64-25 S 11 . (8:33 PS 28-64-30 Х ŝ. 11 : 1 X 219/66 81+3 17528-64-35 × X 11 11 18 45 PSZB-64-40 5 Х 11 X , 1 2/9/06 10:05 PSZ8-63-1 X 11 5 Ħ ŧ 2/9/06 10:08 PSZB-63-2.5 × 1 S X 1 7/9/06 11:14 PSZB-62-2.5 X 1) 11 7/9/06 11:16 PSZB-62-1 **TOTAL NUMBER OF CONTAINERS** DATE TIME DATE TIME RECEIVED BY: RELINQUISHED BY: 16 COMPANYS TO WER SIGNATURE 2 SIGNATURE 2/9/06 SAMPLING COMMENTS: PRINTED NAME.
KORT K ZEILER 1646 GEOMATRIX 2/9/06/1820 PRINTED NAME: POWOC 1820 COMPANY. SIGNATURE SIGNATURE 250 East Rincon Street, Suite 204 PRINTED NAME PRINTED NAME: **Geomatrix** Corona, California 92879-1363 COMPANY Tel 951.273.7400 Fax 951.273.7420 COMPANY

PROJECT NAME AEROJET-AISA PE	AKIN ELMER ACC		DATE. 2/9/200 L	PAGE Q OF 3
PROJECT NUMBER 7190.004 1.7	LABORATORY NAME	CLIENT INFORMATION AEROJE	T-AI 3A REPORTING REQUIREMENTS	
RESULTS TO IS RICHARD ACES	LABORATORY ADDRESS			
TURNAROUND TIME. STANDARD	IRVINE CA 92614			
SAMPLE SHIPMENT METHOD	LABORATORY CONTACT		GEOTRACKER REQUIRED	YES (NO
COURTER	LABORATORY CONTACT PATT L MATA LABORATORY PHONE NUMBER 949-211-70-12		SITE SPECIFIC GLOBAL ID NO	
SAMPLERS (SIGNATURE):	ANAL	'SES		
That if I	<i>hi</i> 8		A Sol (%), Water (W), Cr Other (O) Sol (%), Water (W), Cr Other (O) Filtered Preservative Type	ontainers
DATE TIME SAMPLE NUMBER	EPX			Page ADDITIONAL COMMENTS
2/9/06 11:30 PSZB-63-6	X		GLASS 402 S	X
2/9/06 11:33 PSZB-63-7.5	K		11 2 5	X 1
2/9/06 11:48 PSZB-63-10	X		11 (1 5	X
2/9/06 11:56 PSZB-63-15	X .		11 11 3	X
2/9/06 12:16 PSZB-63-20	X		ti ti S	X 1
2/9/06 12:26 PSZB-63-25	X		11 11 5	KI
2/9/06 12:36 PSZB-61-2.5	*		11 11 5	X []
2/9/06 12:38 PSZB-61-1	X		11 11 2	X- 1
2/9/06 13:42 PSZB-63-30	x		u n s	X I
2/9/06 13:52 PSZB-63-35	X		14 4 5	KI
2/1/06 13:54 PSZB-63-40	X		(1,15	X II
2/9/06 15:03 PSZB-35-5	X		11 21 3	X
2/9/06 15:04 PSZ8-55-2.5	X		(I II S	X I CO
7/9/06 15:05 PSZB-55-1	X		a a s	X I
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RELINQUISHED BY: DATE TIME	RECEIVED BY:	DATE TIME TOTAL NUMB	ER OF CONTAINERS: L	
SIGNATURE Zgie 6	PRINTED NAME:	2/ / SAMPLING CO	DMMENTS:	
PRINTED NAME ZETLER 1910 W	PRINTED NAME: POWCR	3/9/ 1646 SAMPLINGE		
PRINTED NAME ZETLER COMPANY: GEOMATRIX 290 100 100 100 100 100 100 100	COMPANY A T	1/06 1646		
SIGNATURE	SIGNATURE	2/- /		
PRINTED NAME: POWER 34/66 1820	PRINCED NAME GUNAWAN	2/9/06/820		
COMPANY MAS	COMPANY			
SIGNATURE.	SIGNATURE:	250 Eas	st Rincon Street, Suite 204	
PRINTED NAME:	PRINTED NAME.			Geomatrix
COMPANY	COMPANY:	Tel 951.27	3.7400 Fax 951.273.7420	

CHAIN-OF-CUSTODY RECORD

COR 10110

PROJECT	NAME.	4EROJE	T-AI	SA P	ERK	THE	ME	RA	POC	-									DATE. 2/				PA	\GE	3	OF 3
PROJECT NUMB	ER 7/9	0.004	1.7		LABOR	ATORY N	AME	DEL !	NA.	ĸ	CLIE	NT INF	ORMA	TION	AE	Re	JE	T. AISA	REPORTING R	EOUIRE	MENT	S				
RESULTS TO	RICH	IARD RE	ES		LABOR	ATORY A	DORES	S 44 5	TE.	100																
TURNAROUND T		WDARD			TAV	TNE	CA	906	14																	
SAMPLE SHIPME	NT METHOD	_			PAI	ATORY C TI ATORY P	ONTAC	A											GEOTRACKER	REQUI	RED				YES	(NO)
COUR	LEX				1 ABOR	ATORY P	HONE	0 2	₹ }		<u> </u>								SITE SPECIFIC	GLO8/	AL ID N	0				
SAMPL	ERS ((SIGNAT	TURE) :		7				IAL'	YSE	S_						-								
Kunt	2	3			314															Water (W).		Preservative Type			ontainers	
DATE	TIME	NU	MPLE JMBER		EPA														ND SIZE	Sout (S). Vapor (V	Filtered	Preserva	Cooled	MS/MSD	No of Contain	ADDITIONAL COMMENTS
2/9/06	15150	PSZ8-6			X	-			1		<u> </u>	<u> </u>						GLASS	402	5			X		1	
		PSZB-			X	44	_	_	4		_	L_					_	1,	1,	5			X		1	
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2/9/06	16:31	PSZB-	<u>83-55</u>	5	X				+	+								11		S			X		1	
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SIGNATURE	-				SIGNA	ruRE:										250	Ea:	st Rincon St	reet, Suite	204			******			
PRINTED NAM	E				PRINTE		E:											na, California				M		C	ec	omatrix
COMPANY:					COMPA	NY.									Tel	95	1.27	73.7400 F	ax 951.27	3.74	20			•		



LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 02/07/06-02/08/06

Received: 02/08/06

Issued: 02/22/06 09:32

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB0808-01	PSZB-60-2.5	Soil
IPB0808-02	PSZB-60-5	Soil
IPB0808-03	PSZB-60-10	Soil
IPB0808-04	PSZB-60-15	Soil
IPB0808-05	PSZB-60-20	Soil
IPB0808-06	PSZB-60-25	Soil
IPB0808-07	PSZB-60-30	Soil
IPB0808-08	PSZB-60-35	Soil
IPB0808-09	PSZB-60-40	Soil
IPB0808-10	PSZB-45-1	Soil
IPB0808-11	PSZB-45-2.5	Soil



Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

Corona, CA 92879

Report Number: IPB0808

Sampled: 02/07/06-02/08/06 Received: 02/08/06

Attention: Rick Rees

LABORATORY ID	CLIENT ID	MATRIX
1PB0808-12	PSZB-66-1	Soil
IPB0808-13	PSZB-66-2.5	Soil
IPB0808-14	PSZB-45-6	Soil
IPB0808-15	PSZB-45-7.5	Soil
IPB0808-16	PSZB-67-5.5	Soil
IPB0808-17	PSZB-45-10	Soil
IPB0808-18	PSZB-67-1	Soil
IPB0808-19	PSZB-67-2.5	Soil
IPB0808-20	PSZB-45-15	Soil
IPB0808-21	PSZB-45-20	Soil
IPB0808-22	PSZB-45-25	Soil
IPB0808-23	PSZB-45-30	Soil
IPB0808-24	PSZB-51-5	Soil
IPB0808-25	PSZB-51-1	Soil
IPB0808-26	PSZB-45-35	Soil
IPB0808-27	PSZB-45-40	Soil
IPB0808-28	PSZB-51-2.5	Soil
IPB0808-29	PSZB-50-5	Soil
IPB0808-30	PSZB-50-1	Soil
IPB0808-31	PSZB-50-2.5	Soil

Reviewed By:

Del Mar Analytical, Irvine



Project ID: Aerojet Azusa

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

007190.004.1.7 Report Number: IPB0808

Sampled: 02/07/06-02/08/06

Received: 02/08/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB0808-01 (PSZB-60-2.5 - Soi	il)			Sampled	02/07/06			
Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	ND	1	2/9/2006	2/10/2006	
Sample 1D: IPB0808-02 (PSZB-60-5 - Soil)				Sampled	02/07/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B09098	0.040	ND	0.995	2/9/2006	2/10/2006	
Sample ID: IPB0808-03 (PSZB-60-10 - Soil Reporting Units: mg/kg	1)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	ND	1 '	2/9/2006	2/10/2006	
Sample ID: IPB0808-04 (PSZB-60-15 - Soi Reporting Units: mg/kg	1)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	ND	ì	2/9/2006	2/10/2006	
Sample ID: IPB0808-05 (PSZB-60-20 - Soi Reporting Units: mg/kg	1)			Sampled	: 02/08/06		,	
Perchlorate	EPA 314.0 MOD.	6B09098	0.040	ND	0.998	2/9/2006	2/10/2006	
Sample ID: IPB0808-06 (PSZB-60-25 - Soi Reporting Units: mg/kg	1)			Sampled	: 02/08/06			
Perchlorate	EPA 314 0 MOD.	6B09098	0.040	ND	0.998	2/9/2006	2/10/2006	
Sample ID: IPB0808-07 (PSZB-60-30 - Soi Reporting Units: mg/kg	1)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	1	2/10/2006	2/13/2006	
Sample ID: IPB0808-08 (PSZB-60-35 - Soi Reporting Units: mg/kg	ii)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	1.01	2/10/2006	2/13/2006	
Sample ID: IPB0808-09 (PSZB-60-40 - Soi Reporting Units: mg/kg	il)		•	Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	1.01	2/10/2006	2/13/2006	
Sample ID: IPB0808-10 (PSZB-45-1 - Soil)			Sampled	: 02/08/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B10088	0 040	ND	1.01	2/10/2006	2/13/2006	

Del Mar Analytical, Irvine



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Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB0808

Sampled. 02/07/06-02/08/06

Received: 02/08/06

INORGANICS

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Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB0808-11 (PSZB-45-2.5 - Soi Reporting Units: mg/kg	1)			Sampled	02/08/06			
Perchlorate	EPA 314 0 MOD.	6B10088	0.040	ND '	1.01	2/10/2006	2/13/2006	
Sample ID: IPB0808-12 (PSZB-66-1 - Soil) Reporting Units: mg/kg				Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	1	2/10/2006	2/13/2006	
Sample ID: IPB0808-13 (PSZB-66-2.5 - Soi Reporting Units: mg/kg	il)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	1	2/10/2006	2/13/2006	
Sample ID: IPB0808-14 (PSZB-45-6 - Soil) Reporting Units: mg/kg				Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	0.998	2/10/2006	2/13/2006	
Sample 1D: IPB0808-15 (PSZB-45-7.5 - Soi Reporting Units: mg/kg	il)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	1	2/10/2006	2/13/2006	
Sample ID: IPB0808-16 (PSZB-67-5.5 - Soil Reporting Units: mg/kg	il)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0 040	ND	1	2/10/2006	2/13/2006	
Sample ID: IPB0808-17 (PSZB-45-10 - Soi Reporting Units: mg/kg	1)			Sampled	: 02/08/06			•
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	1	2/10/2006	2/13/2006	
Sample ID: IPB0808-18 (PSZB-67-1 - Soil) Reporting Units: mg/kg	•			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	0.995	2/10/2006	2/13/2006	
Sample ID: IPB0808-19 (PSZB-67-2.5 - So Reporting Units: mg/kg	il)			Sampled	1: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	1	2/10/2006	2/13/2006	
Sample 1D: IPB0808-20 (PSZB-45-15 - Soi	il)			Sampled	1: 02/08/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	0.998	2/10/2006	2/13/2006	

Del Mar Analytical, Irvine



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB0808

Sampled: 02/07/06-02/08/06

Received: 02/08/06

INORGANICS

		mon	CAMICS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB0808-21 (PSZB-45-20 - Soil Reporting Units: mg/kg) .			Sampled	02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0 040	ND	0.998	2/10/2006	2/13/2006	
Sample ID: IPB0808-22 (PSZB-45-25 - Soil Reporting Units: mg/kg)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	0.998	2/10/2006	2/13/2006	
Sample ID: IPB0808-23 (PSZB-45-30 - Soil Reporting Units: mg/kg				Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	0.998	2/10/2006	2/13/2006	
Sample ID: IPB0808-24 (PSZB-51-5 - Soil) Reporting Units: mg/kg				Sampled	: 02/08/06			
Perchlorate ,	EPA 314.0 MOD.	6B10088	0.040	ND	1	2/10/2006	2/13/2006	
Sample ID: IPB0808-25 (PSZB-51-1 - Soil) Reporting Units: mg/kg				Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	0.995	2/10/2006	2/13/2006	
Sample ID: IPB0808-26 (PSZB-45-35 - Soil Reporting Units: mg/kg	1)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B10088	0.040	ND	1	2/10/2006	2/13/2006	
Sample ID: IPB0808-27 (PSZB-45-40 - Soil Reporting Units: mg/kg	1)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B13090	0.040	ND,	1	2/13/2006	2/14/2006	
Sample ID: IPB0808-28 (PSZB-51-2.5 - So Reporting Units: mg/kg	il)			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B13090	0.040	ND	I	2/13/2006	2/14/2006	
Sample ID: IPB0808-29 (PSZB-50-5 - Soil) Reporting Units: mg/kg	1			Sampled	: 02/08/06			
Perchlorate	EPA 314.0 MOD.	6B13090	0.040	· ND	0.998	2/13/2006	2/15/2006	
Sample ID: IPB0808-30 (PSZB-50-1 - Soil) Reporting Units: mg/kg)			Sampled	1: 02/08/06	,		
Perchlorate	EPA 314.0 MOD.	6B13090	0.040	ND	0.998	2/13/2006	2/15/2006	

Del Mar Analytical, Irvine

Patty Mata

Project Manager



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st Sr , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798 3620 FAX (702) 798-3621

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Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB0808

Sampled: 02/07/06-02/08/06

Received: 02/08/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB0808-31 (PSZB-50-2.5 - So	il)			Sampled:	02/08/06		•	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B13090	0.040	ND	0.998	2/13/2006	2/15/2006	



Project ID: Aerojet Azusa

007190.004.1.7

Sampled: 02/07/06-02/08/06

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB0808

Received: 02/08/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B09098 Extracted: 02/09/06										
Blank Analyzed: 02/09/2006 (6B09098-B	BLK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 02/09/2006 (6B09098-BS	51)									
Perchlorate	0.493	0.040	mg/kg	0.500		99	85-115			
Matrix Spike Analyzed: 02/10/2006 (6B0	09098-MS1)				Source: I	PB0657-1	2			
Perchlorate	0.565	0.040	mg/kg	0.498	0.076	98	80-120			
Matrix Spike Dup Analyzed: 02/10/2006	6 (6B09098-M	SD1)			Source: I	PB0657-1	2			
Perchlorate	0.557	0.040	mg/kg	0 498	0 076	97	80-120	1	20	
Batch: 6B10088 Extracted: 02/10/06										
Blank Analyzed: 02/13/2006 (6B10088-I	BLK1)									
Perchlorate	ND	0.040	mg/kg							,
LCS Analyzed: 02/13/2006 (6B10088-BS	S1)									
Perchlorate	0 517	0.040	mg/kg	0.500		103	85-115			
Matrix Spike Analyzed: 02/13/2006 (6B	10088-MS1)				Source: 1	PB0808-0	17			
Perchlorate	0.518	0 040	mg/kg	0 498	ND	104	80-120			
Matrix Spike Dup Analyzed: 02/13/2000	6 (6B10088-M	ISD1)			Source: 1	PB0808-0	7			
Perchlorate	0 525	0.040	mg/kg	0.500	ND	105	80-120	1	20	
Batch: 6B13090 Extracted: 02/13/06										
Biank Analyzed: 02/14/2006 (6B13090-)	BLK1)									
Perchlorate	ND	0 040	_ mg/kg							

Del Mar Analytical, Irvine Patty Mata

Project Manager



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB0808

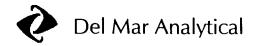
Sampled. 02/07/06-02/08/06

Received: 02/08/06

METHOD BLANK/QC DATA

INORGANICS

Analyte Batch: 6B13090 Extracted: 02/13/06	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Analyzed: 02/14/2006 (6B13090-BS Perchlorate	0.481	, 0.040	mg/kg	0 500		96	85-115			
Matrix Spike Analyzed: 02/14/2006 (6B1	,	0.040	4		Source: II				"	
Perchlorate Matrix Spike Dup Analyzed: 02/14/2006	0.495 (6B13090-MS	•	mg/kg	0 498	ND Source: II	99 PB0808-2 °	80-120 7			
Perchlorate	0.513	0 040	mg/kg	0 500	ND	103	80-120	4	20	



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB0808

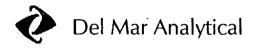
Sampled: 02/07/06-02/08/06

Received: 02/08/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Collon, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID. Aerojet Azusa

riciojet rizusu

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees 007190.004.1.7 Report Number: IPB0808 Sampled. 02/07/06-02/08/06

Received: 02/08/06

Certification Summary

Del Mar Analytical, Irvine

Method Matrix Nelac California
EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

OTTAIN OF TOUTION TREE OF THE		4		JON TOTOS						
PROJECT NAME: AER CJET-AIS	4 ACC-PERKIN ELMEN	(DATE. 2/8/2006	PAGE OF 3						
PROJECT NUMBER 7190.004 1.7	LABORATORY NAME DEZ MAR	CLIENT INFORMATION AFROJET - AI	REPORTING REQUIREMENTS	REPORTING REQUIREMENTS						
RESULTS TO G RICHARD REFS	LABORATORY ADDRESS									
STANDARD	IRVENE CA 92614									
SAMPLE SHIPMENT METHOD	LABORATORY CONTACT. (ATTE MATA LABORATORY PHONE NUMBER 11-261-10-22		GEOTRACKER REQUIRED	YES (NO)						
COURTER	ABORTORY PHONE NUMBER		SITE SPECIFIC GLOBAL ID NO	,						
SAMPLERS (SIGNATURE):	ANAL	YSES								
DATE TIME SAMPLE NUMBER	EPA 314	C	Sol (5), Water (W), Vapor (V), or Other (O) Filtered Preservative Type	COMMENTS COMMENTS						
2/7/06 17:26 PS2B-60- 2.5	X	GLA	SS 402 S	X						
2/7/06 17:37 PSZB-60-5	X	١.	11 5	X						
2/8/06 9:27 PSZB-60-10	X		((S	XII						
2/8/06 7:27 1528-60-15	X		1 11 5	7 1						
2/8/06 9:56 PSZB-60-20	X		1 11 5	X						
2/8/06 10:03 PSZB-60-25	x		11 11 5	X I						
2/8/06 10:13 PS 28-60-30	X		11 5	X I						
2/8/06 10:19 PS 26-60-35	X		11 5	1 1						
2/8/06 10:22 PSZB-60-40	X	· · · · · · · · · · · · · · · · · · ·	1 11 5	X						
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2/8/06 11:23 1528-45-2,5	X		11 5	X I						
2/8/06 11:27 PSZB-66-1	X		1 11 5	XII						
2/8/06 11:29 PSZB. 66-25			11 11 5	XII						
2/8/06 12:53 PSZB-45-6			11 5	4 1						
2/8/06 12:56 PSZB-45-75	X		11 11 3	X I						
RELINQUISHED BY: DATE TIME	RECEIVED BY:	DATE TIME TOTAL NUMBER OF								
		3, SAMPLING COMMENT								
PRINTED NAME:	PRINTED NAME Li chelle Crouch	28/0 28 SAMPLING COMMENT								
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PRINTED NAME: COMPANY COMPANY	PRINTED NAME.		***************************************							
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PRINTED NAME	PRINTED NAME.	-1/ <i>b/</i> 1'9/0//)	on Street, Suite 204 fornia 92879-1363	Goomatais						
COMPANY.	COMPANY DALAT	Tel 951.273.740	0 Fax 951,273,7420	Geomatrix						
	COMPANY DMAI	10.00.12.01.10								

CHAIN-OF-CUSTODY RECORD

IPB0808

COR 10106

PROJECT NAME AEROJET AISA PE	DATE 2/8/2	DATE 2/8/2006 PAGE 2 OF 3									
PROJECT NUMBER	A 17 461 DERTAN TE 100	CLIENT INFORMATION AEROSET	ATS'A REPORTING REQUIREM	REPORTING REQUIREMENTS							
RESULTS TO G. RICHARD PETE	LABORATORY ADDRESS										
STANDARD	TRUTHE CA 47 44										
SAMPLE SHIPMENT METHOD	LABORATORY CONTACT		GEOTRACKER REQUIRE	D YES (NO)							
COURTER	LABORATORY PHONE NUMBER		SITE SPECIFIC GLOBAL	SITE SPECIFIC GLOBAL ID NO							
SAMPLERS (SIGNATURE):	ANAL	YSES									
S, (22: (3: 3: 4: 5: 42)			.0								
	 		er (W),	Type							
			[5 <u>#</u>]	a a							
SAMPLE	EPA		CONTAINER SO TYPE AND SIZE	Preservative Cooled Cooled COMMENTS COMMENTS							
DATE TIME NUMBER	ע		TYPE AND SIZE 原原	COMMENTS Completed COMMENTS COMMENTS							
2/5/06 13-01 PSZB 61-65	X		GLASS 402 S	×)							
1/8/06 13:04 PS ZB 45-10	X		1, 1, 2	× 1							
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2/8/06 13:07 PSZB-67-2,5	X		11 11 3	X 1							
2/8/06 13:13 PSZB-45-15	X		(1 ;1 5	XII							
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2/8/06 14"21 PSZB 45-30	X		11 11 \$	X I							
2/8/06 14:30 PSZB-51-5	X		11 11 5	X I							
2/8/CE 14:33 PSZB-51-1			1, (1 3	X							
2/8/06 14:33 PSZB-45-35			11 11 . 2	X i							
218/00 14:38 7528-45-40	x		11 11 5	X 1							
2/8/06 14 37 P528-51-2,5	X		11 11 5								
2/8/06 15:44 PSZB - 50-5	X		11 11 5	X 1							
2/8/06 15:47 PSZB-50-1			11 11 5								
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PRINTED NAME KURT K LEILER	M, LLUI LCY DU CL	2/8/04 1628 SAMPLING CO									
BERNATRIX	DIMA,										
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PRINTED NAME: COVICE	PRINTED NAME:										
Campanya,	COMPANY.										
SIGNATURE	SIGNATURE: Ruin	250 Eas Corona Tel 951.273	t Rincon Street, Suite 204								
PRINTED NAME	PRINTED NAME.	Corona	a, California 92879-1363	Geomatrix							
COMPANY.	COMPANY: OMAI	Tel 951.27	3.7400 Fax 951.273.7420								

CHAIN-OF-CUSTODY RECORD

COR 10107

PROJECT	NAME:	AEROJE	T-AIS	A PE	K KJ	D E	MI	汉人	40 C	-									DATE 2/8/2006 PAGE 3 OF 3							
PROJECT NUM	BER 719	0.004	1,7		LAB	PEL	RY NA	ME		-		1	TINF	ORMATIC	ON A	EKO3	SE.	T-AISA	REPORTING R	EQUIRE	MENT	S				
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STAN SAMPLE SHIPM	TIME				1	XVZ	ME	CA	4:	LIL																
SAMPLE SHIPM	MENT METHOD				LAB	ORATO ATT ORATO	RY CO	NTACT			•							* -	GEOTRACKER	REQUI	RED				YES	(No
COUR	IER				LAB	ORATO	RY PHO	NE NU	MBER.										SITE SPECIFIC							
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1					314]							ļ							o at o		e Type			of Containers	
	1	S	AMPLE		2													CONT	AINER	3.5	,	vati		g	ပိ	ADDITIONAL
DATE	TIME	1	UMBER		EP								l						ND SIZE	Soil (S), Wate Vapor (V), or	Filtered	Preservative	Cooled	MS/MSD	NO O	ADDITIONAL COMMENTS
2/8/06	15.50	PSZB-	50-2 ·		X	+	+	+	+-	+	-		-	\dashv	╁	┪	 	GLASS		5	14	-	×	2	2	
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COMPANY:				CON	EDVANDO RUIZ COMPANY: PMAI							2		Tel 951.273.7400 Fax 951.273.7420												



LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 02/13/06 Received: 02/13/06

Issued: 02/20/06 13:56

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 5°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Only the rush perchlorate sample results are included in this report. All other results will be sent under

separate cover when complete.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB1266-07	PSZB-66-30	Soil
IPB1266-08	PSZB-66-35	Soil
IPB1266-09	PSZB-66-40	Soil
IPB1266-16	PSZB-67-35	Soil
IPB1266-17	PSZB-67-40	Soil

Reviewed By:

Del Mar Analytical, Irvine





Corona, CA 92879

Attention: Rick Rees

250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB1266

Sampled: 02/13/06

Received: 02/13/06

manifolding and both filters. Lory and additions and analysis and the second of the control of t

INORGANICS												
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers				
Sample ID: IPB1266-07 (PSZB-66-30 - Soil)											
Reporting Units: mg/kg	55	/m.e										
Perchlorate	EPA 314.0 MOD.	6B15145	0.040	ND	0 998	2/15/2006	2/17/2006					
Sample ID: IPB1266-08 (PSZB-66-35 - Soil)				•							
Reporting Units: mg/kg Perchlorate	EDA 214 0 MOD	(D15145	0.040	N.TT	0.000	2/15/2007	24.6/2006					
rerchiorate	EPA 314.0 MOD.	6B15145	0.040	ND	0.998	2/15/2006	2/16/2006					
Sample ID: IPB1266-09 (PSZB-66-40 - Soil)											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B15145	0.040	ND	0.998	2/15/2006	2/17/2006					
		0013143	0.040	NU	0.998	2/13/2000	2/1//2000					
Sample ID: IPB1266-16 (PSZB-67-35 - Soil Reporting Units: mg/kg)											
Perchlorate	EPA 314.0 MOD.	6B15145	0.040	ND	0.998	2/15/2006	2/17/2006					
Sample ID: IPB1266-17 (PSZB-67-40 - Soil))											
Reporting Units: mg/kg	•											
Perchlorate	EPA 314.0 MOD.	6B15145	0.040	ND	0.995	2/15/2006	2/17/2006					



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB1266

Sampled: 02/13/06

Received: 02/13/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B15145 Extracted: 02/15/06										
Blank Analyzed: 02/16/2006 (6B15145-B	LKI)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 02/16/2006 (6B15145-BS	1)									
Perchlorate	0.525	0 040	mg/kg	0.500		105	85-115			
Matrix Spike Analyzed: 02/16/2006 (6B1	5145-MS1)				Source: I	PB1266-0	7			
Perchlorate	0.534	0.040	mg/kg	0.498	ND	107	80-120			
Matrix Spike Dup Analyzed: 02/16/2006	(6B15145-MS	D1)			Source: I	PB1266-0	7			
Perchlorate	0 538	0 040	mg/kg	0.500	ND	108	80-120	1	20	



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9830 South 51st St , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.17

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1266

Sampled. 02/13/06

Received: 02/13/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st 51, Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number IPB1266

Sampled: 02/13/06 Received: 02/13/06

Certification Summary

Del Mar Analytical, Irvine

Method Matrix Nelac California
EPA 314.0 MOD. Soil N/A N/A

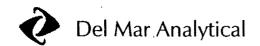
Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

CHAIN-OF-CUSTODY RECORD	/, C × 5	413 as COR 10112					
PROJECT NAME AEROJET - AISA P	ERKINELMER ACC	DATE: 2/10/06 PAGE X 1 OF 2					
PROJECT NUMBER 7190,004 1.7	DEL MAR AERO JET AISA	REPORTING REQUIREMENTS					
RESULTS TO G. RICHARD REES	LABORATORY ADDRESS 17 461 DERIAN STEICO	-2212//					
TURNAROUND TIME STANDARD	IRVINE CA 92614	110/264					
SAMPLE SHIPMENT METHOD	LABORATORY CONTACT PATTE MATA G	EOTRACKER REQUIRED YES NO.					
COURTER	LABORATORY CONTACT PATTE MATA GI LABORATORY PHONE NUMBER 149-261-1022 SI	ITE SPECIFIC GLOBAL ID NO					
SAMPLERS (SIGNATURE):	ANALYSES						
2thz	314 TURWAND	A Value (W). A Value (W). A Value (V). Containers					
DATE TIME NUMBER	CONTAIL TYPE AND	D SIZE Signature and Signature of Size Size Size Size Size Size Size Size					
2/13/06 9:21 PSZB-66-6	X GLASS 4						
2/13/06 9:25 PS28-66-7.5	X 1	11 S X 1					
2/19/06 9:35 PSZB-66-10	X	11 S X 1					
2113/06 9:50 PS28-66-15	X II	1 S X I					
2/13/06 10:09 PSZB-6C-20	X	11 8 8 1					
2/13/06 12:29 1528-66-25	X	11 3 X 1					
2/13/06 12:39 PSZB-66-30	X X	II S X I IWK TUAN AROUND					
-2/13/06 12:47 PSZB-66-35	XX	1 S X I I WK TURNAROWN					
7.113/06 12:53 PSZB-66-40	XX	11 S X (LWK TUANNOWD					
2/13/06 19:33 PSZB-67-7.5	X	(
2/13/06 14:39 PSZB-67-10	X	1 S X 1					
2/13/06 14:51 PSZB-67-15	X	1' S X 1					
2/13/06 15:02 PS 28-67-20	X	ic s X i NAM					
2/13/06 15:22 PSZB-67-25	X u	11 S X I					
2/13/06 15:35 PSZB-67-30	X	u 8 X 1					
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PRINTED NAME COMPANY:	PRINTED NAME: COMPANY: 250 East Rincon Street Corona, California 9: Tel 951.273.7400 Fax	²⁸⁷⁹⁻¹³⁶³ Geomatrix					

CHAIN-OF-CUSTODY RECORD

COR 10113

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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

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007190.004.1.7

Sampled: 02/09/06-02/10/06

Received: 02/10/06 Issued: 02/24/06 16:43

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 5°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB1078-01	PSZB-58-5	Soil
IPB1078-02	PSZB-58-2.5	Soil
IPB1078-03	PSZB-58-1	Soil
IPB1078-04	PSZB-62-30	Soil
IPB1078-05	PSZB-62-35	Soil
IPB1078-06	PSZB-62-40	Soil
IPB1078-07	PSZB-61-6	Soil
IPB1078-08	PSZB-61-7.5	Soil
IPB1078-09	PSZB-61-10	Soil
IPB1078-10	PSZB-61-15	Soil
IPB1078-11	PSZB-61-20	Soil





Project ID: Aerojet Azusa

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250 East Rincon Street, Suite 204 Corona, CA 92879 007190.004.1.7 Report Number: IPB1078 Sampled: 02/09/06-02/10/06

Received: 02/10/06

Attention: Rick Rees

LABORATORY ID	CLIENT ID	MATRIX
IPB1078-12	PSZB-61-25	Soil
IPB1078-13	PSZB-61-30	Soil
IPB1078-14 ,	PSZB-61-35	Soil
IPB1078-15	PSZB-61-40	Soil

Reviewed By:

Del Mar Analytical, Irvine



Project ID: Aerojet Azusa

007190.004.1.7

250 East Rincon Street, Suite 204 Corona, CA 92879

Report Number: IPB1078

Sampled: 02/09/06-02/10/06 Received: 02/10/06

Attention: Rick Rees

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1078-01 (PSZB-58-5 - Soil)				Sampled:	02/09/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B14119	0.040	0.94	0.998	2/14/2006	2/15/2006	
Sample ID: IPB1078-02 (PSZB-58-2.5 - Soi	1)			Sampled	02/09/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B14119	0.20	1.8	4.99	2/14/2006	2/16/2006	
Sample ID: IPB1078-03 (PSZB-58-1 - Soil) Reporting Units: mg/kg				Sampled	02/09/06			
Perchlorate	EPA 314.0 MOD.	6B14119	0.20	0.99	4.98	2/14/2006	2/16/2006	
Sample ID: IPB1078-04 (PSZB-62-30 - Soil Reporting Units: mg/kg	()			Sampled	: 02/10/06			
Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	0.998	2/14/2006	2/15/2006	
Sample ID: IPB1078-05 (PSZB-62-35 - Soil Reporting Units: mg/kg	l)			Sampled	: 02/10/06			
Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	0.998	2/14/2006	2/15/2006	
Sample ID: IPB1078-06 (PSZB-62-40 - Soil Reporting Units: mg/kg	1)			Sampled	: 02/10/06			
Perchlorate Perchlorate	EPA 314.0 MOD.	6B14119	0.040	ND	0.998	2/14/2006	2/15/2006	
Sample ID: IPB1078-07 (PSZB-61-6 - Soil) Reporting Units: mg/kg				Sampled	: 02/10/06			
Perchlorate	EPA 314.0 MOD.	6B14119	0.040	0.067	0.998	2/14/2006	2/15/2006	
Sample ID: IPB1078-08 (PSZB-61-7.5 - So Reporting Units: mg/kg	ii)			Sampled	: 02/10/06	•		
Perchlorate	EPA 314.0 MOD.	6B15144	0.040	0.084	0.998	2/15/2006	2/16/2006	MI
Sample ID: IPB1078-09 (PSZB-61-10 - Soi Reporting Units: mg/kg	l)			Sampled	: 02/10/06			
Perchlorate Perchlorate	EPA 314.0 MOD.	6B15144	0.040	ND	l	2/15/2006	2/16/2006	
Sample ID: IPB1078-10 (PSZB-61-15 - Soi Reporting Units: mg/kg	il)			Sampled	: 02/10/06			
Perchlorate	EPA 314.0 MOD.	6B15144	0.040	ND	0.998	2/15/2006	2/16/2006	



Project ID: Aerojet Azusa

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Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1078

Sampled: 02/09/06-02/10/06

Received: 02/10/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analýzed	Data Qualifiers
Sample ID: IPB1078-11 (PSZB-61-20 - Soil))			Sampled	02/10/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B15144	0.040	ND	0.993	2/15/2006	2/16/2006	
Sample ID: IPB1078-12 (PSZB-61-25 - Soi Reporting Units: mg/kg	1)			Sampled	: 02/10/06			
Perchlorate	EPA: 314.0 MOD.	6B15144	0.040	ND	0.998	2/15/2006	2/16/2006	
Sample ID: IPB1078-13 (PSZB-61-30 - Soi Reporting Units: mg/kg	1)			Sampled	: 02/10/06			,
Perchlorate	EPA 314.0 MOD.	6B15144	0.040	ND	0.998	2/15/2006	2/16/2006	
Sample ID: IPB1078-14 (PSZB-61-35 - Soi Reporting Units: mg/kg	1)			Sampled	: 02/10/06			
Perchlorate	EPA 314.0 MOD.	6B15144	0.040	ND	0.995	2/15/2006	2/16/2006	
Sample 1D: IPB1078-15 (PSZB-61-40 - Soi Reporting Units: mg/kg	1)			Sampled	: 02/10/06			
Perchlorate	EPA 314.0 MOD.	6B15144	0.040	ND	0.998	2/15/2006	2/16/2006	



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1078

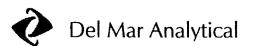
Sampled: 02/09/06-02/10/06

Received: 02/10/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers	
Batch: 6B14119 Extracted: 02/14/06											
Blank Analyzed: 02/14/2006 (6B14119-B	LK1)										
Perchlorate	ND	0.040	mg/kg								
LCS Analyzed: 02/14/2006 (6B14119-BS	31)										
Perchlorate	0.510	0.040	mg/kg	0 500		102	85-115				
Matrix Spike Analyzed: 02/14/2006 (6B)	(4119-MS1)				Source: I	PB0946-2	3				
Perchlorate	0.710	0.040	mg/kg	0.499	0 14	114	80-120				
Matrix Spike Dup Analyzed: 02/14/2006											
Perchlorate	0.699	0.040	mg/kg	0.499	0.14	112	80-120	2	20		
Batch: 6B15144 Extracted: 02/15/06											
Blank Analyzed: 02/16/2006 (6B15144-F	BLKI)	,									
Perchlorate	ND	0.040	mg/kg								
LCS Analyzed: 02/16/2006 (6B15144-BS	51)										
Perchlorate	0.535	0.040	mg/kg	0.500		107	85-115				
Matrix Spike Analyzed: 02/16/2006 (6B		Source: IPB1078-08									
Perchlorate	0 771	0 040	mg/kg	0.499	0.084	138	80-120			MI	
Matrix Spike Dup Analyzed: 02/16/2000	6 (6B15144-M	SD1)			Source:	IPB1078-0	8				
Perchlorate	0.698	0.040	mg/kg	0.499	0.084	123	80-120	10	20	MI	



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr , Suite A. Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South S1st St , Suite B 120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Corona, CA 92879

Attention: Rick Rees

250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB1078

Sampled: 02/09/06-02/10/06

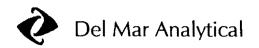
Received: 02/10/06

DATA QUALIFIERS AND DEFINITIONS

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 8S044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB1078

Sampled: 02/09/06-02/10/06

Received: 02/10/06

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method Matrix Nelac California
EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

CHAIN-OF-CUSTODY RECORD

T(31)/8 COR 10111

PROJECT NAME: AEROJET-AISA PERKINGLIMER ACC											DATE 2/16/06 PAGE OF													
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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 02/13/06 Received: 02/13/06

Issued: 02/28/06 13:32

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 5°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Only the normal TAT perchlorate sample results are included in this report. All rush results were sent

2/20/06.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB1266-01	PSZB-66-6	Soil
IPB1266-02	PSZB-66-7.5	Soil
IPB1266-03	PSZB-66-10	Soil
IPB1266-04	PSZB-66-15	Soil
IPB1266-05	PSZB-66-20	Soil
IPB1266-06	PSZB-66-25	Soil
IPB1266-10	PSZB-67-7.5	Soil
IPB1266-11	PSZB-67-10	Soil
IPB1266-12	PSZB-67-15	Soil
IPB1266-13	PSZB-67-20	Soil

Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata Project Manager





Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: 1PB1266

Sampled: 02/13/06

Received: 02/13/06

LABORATORY ID
1PB1266-14

IPB1266-15

CLIENT ID

PSZB-67-25

PSZB-67-30

MATRIX Soil

Soil

Reviewed By:

Del Mar Analytical, IrvineMichele Chamberlin For Patty Mata

Muchile Chamberein

Project Manager



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1266

Sampled: 02/13/06 Received: 02/13/06

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Danauting	0	Dilution	Data	Data
JKGANICS				

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1266-01 (PSZB-66-6 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	0.998	2/16/2006	2/17/2006	
Sample ID: IPB1266-02 (PSZB-66-7.5 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	0.998	2/16/2006	2/17/2006	
Sample ID: IPB1266-03 (PSZB-66-10 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	0.998	2/16/2006	2/17/2006	
Sample ID: IPB1266-04 (PSZB-66-15 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	0.998	2/16/2006	2/17/2006	
Sample ID: IPB1266-05 (PSZB-66-20 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	1	2/16/2006	2/20/2006	,
Sample ID: IPB1266-06 (PSZB-66-25 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	0.995	2/16/2006	2/17/2006	
Sample ID: IPB1266-10 (PSZB-67-7.5 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	6B16138	0.040	ND	0.995	2/16/2006	2/17/2006	
Sample ID: IPB1266-11 (PSZB-67-10 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	1	2/16/2006	2/17/2006	
Sample ID: IPB1266-12 (PSZB-67-15 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	0.998	2/16/2006	2/17/2006	
Sample ID: IPB1266-13 (PSZB-67-20 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	i	2/16/2006	2/17/2006	

Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata Project Manager





Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879

Report Number: IPB1266

Sampled: 02/13/06

Received: 02/13/06

Attention: Rick Rees

250 East Rincon Street, Suite 204

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1266-14 (PSZB-67-25 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	1	2/16/2006	2/17/2006	
Sample ID: IPB1266-15 (PSZB-67-30 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B16138	0.040	ND	i	2/16/2006	2/17/2006	

Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata Project Manager



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB1266

Sampled: 02/13/06

Received: 02/13/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B16138 Extracted: 02/16/06										
Blank Analyzed: 02/20/2006 (6B16138-B	LK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 02/17/2006 (6B16138-BS	1)									
Perchlorate	0.539	0 040	mg/kg	0 500		108	85-115			
Matrix Spike Analyzed: 02/17/2006 (6BI	6138-MS1)				Source: I	PB1266-0	1			
Perchlorate	0 523	0.040	mg/kg	0.499	ND	105	80-120			
Matrix Spike Dup Analyzed: 02/17/2006	(6B16138-M	ISD1)			Source: 1	PB1266-0	1			
Perchlorate	0.523	0 040	mg/kg	0.499	ND	105	80-120	0	20	



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID. Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1266

Sampled. 02/13/06

Received: 02/13/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata Project Manager



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

Report Number: IPB1266

Sampled: 02/13/06

Received: 02/13/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	N/A

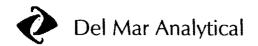
Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www testamericainc.com

CHAIN-OF-CUSTODY RECORD

COR 10112 PAGE X | OF 2 PROJECT NAME AEROJET-AISA PERKIN ELMER ACC PROJECT NUMBER 7190,004 1.7 LABORATORY NAME DEL MAR CLIENT INFORMATION AERO JET AISA LABORATORY ADDRESS RESULTS TO G. AICHARD REES TURNAROUND TIME STANDARD IRVINE CA 92614 LABORATORY CONTACT
PATT MATA
LABORATORY PHONE NUMBER
149-261-1022 SAMPLE SHIPMENT METHOD (NO) GEOTRACKER REQUIRED COUKTER SITE SPECIFIC GLOBAL ID NO **ANALYSES** SAMPLERS (SIGNATURE): TURPHANIA MS/MSD EPA SAMPLE ¥ CONTAINER **ADDITIONAL** DATE TIME NUMBER TYPE AND SIZE COMMENTS 2/13/06 9:21 PSZB-66-6 GLASS 402 5 PSZB-66-7.5 X 9:25 Į٠ X 5 - 2119106 9:35 PSZ8-66-10 16 11 15 S - 2/13/06 9:50 PS 28-66-15 X 11 × 2/13/06 10:09 PSZ8-6C-20 H \$ × [1 -12/13/06 12:29 PSZB-66-25 X u 11 9 XX S 11 IJ IWK TURY AROUND - 2/13/06 12:39 PSZB-66-30 XX 2/13/06 12:47 PSZB-66-35 11 I WK. TURNAROWS Į, 人 -3113106 12:53 PSZB-66-40 L 11 I WK TURMROWD -2/13/06 19:33 PSZB-67-7.5 X 13 S X 11 X 2/13/06 14:39 PSZB-67-10 K S X 14 2/13/06 X li 14:51 PS2B-67-15 u NAM 2/13/08 15:02 PS 28-67-20 16 10 Ħ 15:22 PSZB-67-25 S X 2/13/06 u 15:35 PSZB-67-30 5 u Ħ TOTAL NUMBER OF CONTAINERS. 15 RELINQUISHED BY: DATE TIME RECEIVED BY: DATE TIME SIGNATURE 2 407 SONATURE: 2/13/06 02/ WK TURNAROUND - PLEASE MAKE PRINTED NAME: |13/ |06 5-DAY TURNAROUND COMPANY: GERMATATY SIGNOTURE: 1605 PRINTED NAME 250 East Rincon Street, Suite 204 PRINTED NAME: PRINTED NAME **Geomatrix** Corona, California 92879-1363 COMPANY Tel 951.273.7400 Fax 951.273.7420 COMPANY

163

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PROJECT	NAME:	AERO JE	T-AI	SA	PEX	KT.	NE	LME	R	AOC									DATE: 2				P	٩GE	ユ	OF 3
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RESULTS TO	RICH	IARD RE	ES		48	ORATO	RY AD	DRESS	W.	TEI	00															
TURNAROUND	TIME ST	ANDARE	> S D	AV	I	VIZ	VE C	A	126	14																
SAMPLE SHIPM	ENT METHOD)			LAB	ORATO	PRY CO	NTACT										•	GEOTRACKER	REQUI	RED				YES	NO.
COU	KIER				LAB	ORATO	26	ONE NU	MBER										SITE SPECIFIC			u				
SAMPL	ERS	(SIGNAT	TURE) :					/	ANA	LY	SES	3													
2.49					314	SOAY TURNABUR										-				Soil (S), Water (W). Vapor (V), or Other (O)		tive Type			of Containers	
DATE	TIME	NL	MPLE		EPA.	SOAY												TYPE A	AINER ND SIZE		Filtered	Preservative	Cooled	MS/MSD	No of C	ADDITIONAL COMMENTS
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2/13/06	15:44	P528-6	7-41)	X	X											•	11	rt	S			X		1	SDAY TURNAROUR
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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa 007190.004.1.7

Sampled: 02/14/06 Received: 02/14/06

and the second process of the second of the second

Issued: 03/16/06 17:00

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation. EPA 314.0 analysis

of samples IPBI403-22 and -23 were requested on 3/3/06.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Only the additional Perchlorate results for samples IPB1403-22 and -23 are included in this report. All

other results were sent under separate cover.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

 LABORATORY ID
 CLIENT ID
 MATRIX

 IPB1403-22
 PSZB-57-6
 Soil

 IPB1403-23
 PSZB-57-7.5
 Soil

Reviewed By:

Del Mar Analytical - Irvine

Patty Mata Project Manager





Project ID: Aerojet Azusa

Corona, CA 92879

007190.004.1.7 Report Number: IPB1403

Sampled: 02/14/06

Received: 02/14/06

Attention: Rick Rees

250 East Rincon Street, Suite 204

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1403-22 (PSZB-57-6 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C06115	2.0	10	50	3/6/2006	3/9/2006	
Sample ID: IPB1403-23 (PSZB-57-7.5 - See Reporting Units: mg/kg	,	600113	2.0	10	30	3/0/2000	3/9/2000	
Perchlorate	EPA 314.0 MOD.	6C06115	0.20	1.0	5.01	3/6/2006	3/9/2006	



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1403

Sampled: 02/14/06

Received: 02/14/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data -
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C06115 Extracted: 03/06/06									•	
Blank Analyzed: 03/07/2006 (6C06115-B	LK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/07/2006 (6C06115-BS	1)									
Perchlorate	0.517	0 040	mg/kg	0.500		103	85-115			
Matrix Spike Analyzed: 03/07/2006 (6C0	6115-MS1)				Source: I	PC0595-1	2			
Perchlorate	0.589	0.040	mg/kg	0.500	0 044	109	80-120			
Matrix Spike Dup Analyzed: 03/07/2006	(6C06115-MS	D1)			Source: I	PC0595-1	2			
Perchlorate	0.602	0.040	mg/kg	0 501	0.044	111	80-120	2	20	

Del Mar Analytical - Irvine Patty Mata Project Manager



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Suirset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

ND

250 East Rincon Street, Suite 204

Report Number: IPB1403

Sampled: 02/14/06

Received: 02/14/06

DATA QUALIFIERS AND DEFINITIONS

Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

RPD Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667. FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

Corona, CA 92879

007190.004.1.7 Report Number: IPB1403

Sampled: 02/14/06

Received: 02/14/06

Attention: Rick Rees

Certification Summary

Del Mar Analytical - Irvine

250 East Rincon Street, Suite 204

Method Matrix Nelac California EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www testamericainc com

Del Mar Analytical - Irvine Patty Mata Project Manager

PROJECT NAME: AEROJET-AISA	PERKIN ELMER ASC	\	DATE 4/14/86 PAGE 1 OF 2				
PROJECT NUMBER 7/90, CO4 1.7	LABORATORY NAME DELMAR	CLIENT INFORMATION AEROJET-AISA	REPORTING REQUIREMENTS				
RESULTS TO G. RICHARD REES	LABORATORY ADDRESS	-					
TURNAROUND TIME STANDARD	IRVINE'CA 9264		IPB 1403				
SAMPLE SHIPMENT METHOD	LABORATORY CONTACT PATTI MATA LABORATORY PHONE NUMBER 149-261-122		GEOTRACKER REQUIRED YES (NO)				
COURTER	LABORATORY PHONE NUMBER		SITE SPECIFIC GLOBAL ID NO				
SAMPLERS (SIGNATURE):	ANAL	/SES					
			0				
Kith S	NA A		(W),				
	EPA 3 (4 SDAY TORMAGO		Sol (S), Waler (W Appor (V), or Othe Cooled				
SAMPLE	W 4 3	CONT	AINER of (%) Wall				
DATE TIME NUMBER	Z Z Z		AINER Solutional Cooled Solutional Comments				
2/14/06 8:13 PSZB-50-7.5	×	GLASS	407 S X 1				
2/14/06 8:28 PSZB-50-10	X	71	11 5 × 1				
2/14/06 8:39 PSZB-50-15	x	i i i i i i i i i i i i i i i i i i i	11 8 1 1				
2/14/06 8:51 P528-50-20	X	l l	(1 S X 1				
2/14/06 9:11 8528-50-25	x	Ht.	11 S X 1				
2114/06 9:32 PSZ8-50-30	XX	HC HC	11 S X 1 5 DAY TUANAROUND				
2/14/06 9:39 PSZB-50-35	XX	·	" S X I SDAY TURNAMOUND				
2/14/06 9:43 PSZB-50-40	XX	II.	11 5 X 1 5 DAY TURNAGUAD				
2/14/06 9:54 PSZB-57-2.5	X		11 S X 1				
2/14/06 10:05 PSZB-57-1	x	. It	u S X 1				
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2/19/06 11:26 PSZ8-59-1	X	21	ıı s x l				
2/14/06 11:32 PSZ8-51-7.5	X	i l	11 5 X 1				
2/14/06 11:59 PSZB-51-10	X	16	1, 2 X 1				
RELINQUISHED BY: DATE TIME		DATE TIME TOTAL NUMBER OF CONTAIN	INERS. 15				
PRINTED NAME KUAT REZER	PRINTED NAME AUTOS	SAMPLING COMMENTS					
PRINTED NAME KUAT ZEZER	PRINTED NAME SILIA TOTAL	14/138					
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SIGNATURE:	SIGNATURE:	250 East Rincon St	reet. Suite 204				
PRINTED NAME:	PRINTED NAME.	Corona, California					
COMPANY	COMPANY	Tel 951.273.7400 F	ax 951.273.7420				
	@ 3 c						

CHAIN-OF-CUSTODY RECORD

COR 10115

CHAIN-OF-COSTODT RECORD		0011 10111				
PROJECT NAME: A EROJET -AISA	PERKINELMER ADC	DATE: 1/14/06 PAGE 2 OF 2				
PROJECT NUMBER 7/90.864 1.7	I DEL MAR AFROJEI-ALSA	REPORTING REQUIREMENTS				
RESULTS TO G. RICHARD REES	LABORATORY ADDRESS					
TURNAROUND TIME STAND ARD	IRVINE CA 92614					
SAMPLE SHIPMENT METHOD	LABORATORY CONTACT: PATT = MATA	GEOTRACKER REQUIRED YES (NO				
COURTER	LABORATORY CONTACT: PATTY MATA LABORATORY PHONE NUMBER 147-261-1022	BITE SPECIFIC GLOBAL ID NO				
SAMPLERS (SIGNATURE):	ANALYSES					
		0				
Jut of 3		Type Off (W.)				
		indi i y ı ı ı z ı				
SAMPLE		NER Cooked Cooke				
DATE TIME NUMBER	CONTAI TYPE AN	NER Coded Co				
2/14/06 12:51 PSZB-65-5	X GLASS 4					
2/14/06 12:55 PSZB-65-2.5		11				
2/14/06 12:57 PSZB-65-1		, S X 1				
2/14/06 15:38 PSZB-52 5		" S X I				
2/14/06 is:40 PSZB-56-25	 	11 S X II				
2/14/06 15.42 PSZB-56-1		,, S X)				
21/4/06 16:10 PSZB-57-6	 	1 S X I HOLD				
2/14/06 16.12 1528.57-7.5		X) HOLD				
2/14/06 16.25 PSZB-57-10		X X I				
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COMPANY:	PRINTED NAME Corona, California COMPANY. Tel 951.273.7400 Fa					
CONTRACT:	Tel 951.273.1400 Fa	A 901.210.1720				



LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 02/14/06 Received: 02/14/06 Issued: 02/28/06 17:07

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IPB1403-01	PSZB-50-7.5	Soil
IPB1403-02	PSZB-50-10	Soil
IPB1403-03	PSZB-50-15	Soil
IPB1403-04	PSZB-50-20	Soil
IPB1403-05	PSZB-50-25	Soil
IPB1403-06	PSZB-50-30	Soil
IPB1403-07	PSZB-50-35	Soil
IPB1403-08	PSZB-50-40	Soil
IPB1403-09	PSZB-57-2.5	Soil
IPB1403-10	PSZB-57-1	Soil
IPB1403-11	PSZB-59-5	Soil
IPB1403-12	PSZB-59-2.5	Soil
IPB1403-13	PSZB-59-1	Soil
IPB1403-14	PSZB-51-7.5	Soil
IPB1403-15	PSZB-51-10	Soil
IPB1403-16	PSZB-65-5	Soil
IPB1403-17	PSZB-65-2.5	Soil
IPB1403-18	PSZB-65-1	Soil
IPB1403-19	PSZB-56-5	Soil
IPB1403-20	PSZB-56-2.5	Soil
IPB1403-21	PSZB-56-1	Soil
IPB1403-24	PSZB-57-10	Soil

Reviewed By:

Del Mar Analytical, Irvine Amy Windham For Patty Mata

any Windham

Project Manager



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: 1PB1403

Sampled: 02/14/06

Received: 02/14/06

INORGANICS

INORGANICS											
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers			
Sample ID: IPB1403-01 (PSZB-50-7.5 - Soi Reporting Units: mg/kg	•	CD 1 3000	0.040	ND.	0.000	247/2006	2/10/2004				
Perchlorate	EPA 314.0 MOD.	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006				
Sample ID: IPB1403-02 (PSZB-50-10 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006				
Sample ID: IPB1403-03 (PSZB-50-15 - Soil Reporting Units: mg/kg											
Perchlorate	EPA 314.0 MOD	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006				
Sample ID: IPB1403-04 (PSZB-50-20 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006				
Sample ID: IPB1403-05 (PSZB-50-25 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006				
Sample ID: IPB1403-06 (PSZB-50-30 - Soil Reporting Units: mg/kg)										
Perchlorate	EPA 314.0 MOD.	6B17097	0.040	ND	0 998	2/17/2006	2/17/2006				
Sample ID: IPB1403-07 (PSZB-50-35 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17097	0.040	ND	0.000	2/17/2006	2/17/2006				
		001/09/	0 040	ND	0.998	2/17/2006	2/17/2006				
Sample ID: 1PB1403-08 (PSZB-50-40 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17097	0.040	ND	0.998	2/17/2006	2/17/2006				
Sample ID: IPB1403-09 (PSZB-57-2.5 - Soi Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	6B17098	0.040	0.20	0.998	2/17/2006	2/19/2004				
		001/098	0.040	U.2U	0.338	2/1//2000	2/18/2006				
Sample ID: IPB1403-10 (PSZB-57-1 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17098	0.20	1.3	4.98	2/17/2006	2/21/2006				



Project ID: Aerojet Azusa

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

007190.004.1.7 Report Number: IPB1403

Sampled: 02/14/06

Received: 02/14/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1403-11 (PSZB-59-5 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17098	0.040	ND	0.995	2/17/2006	2/18/2006	
Sample ID: IPB1403-12 (PSZB-59-2.5 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	6B17098	0.040	0.052	1	2/17/2006	2/18/2006	
Sample ID: IPB1403-13 (PSZB-59-1 - Soil) Reporting Units: mg/kg		(D17000	0.040	. m	0.000	247000	n (n D /2004)	
Perchlorate Sample 1D: IPB1403-14 (PSZB-51-7.5 - So Reporting Units: mg/kg	EPA 314.0 MOD.	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006	
Perchlorate Sample ID: IPB1403-15 (PSZB-51-10 - Soi	EPA 314.0 MOD.	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17098	0.040	ND	0.995	2/17/2006	2/18/2006	
Sample ID: IPB1403-16 (PSZB-65-5 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006	(
Sample ID: 1PB1403-17 (PSZB-65-2.5 - So Reporting Units: mg/kg Perchlorate	ii) EPA 314.0 MOD.	6B17098	0.040	ND	0.995	2/17/2006	2/18/2006	
Sample ID: IPB1403-18 (PSZB-65-I - Soil Reporting Units: mg/kg				2				
Perchlorate Sample ID: IPB1403-I9 (PSZB-56-5 - Soil	EPA 314,0 MOD.	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006	
Reporting Units: mg/kg Perchlorate Sample 1D: IPB1403-20 (PSZB-56-2.5 - Sc	EPA 314.0 MOD.	6B17098	0.040	ND	0.995	2/17/2006	2/18/2006	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006	



Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

Sampled: 02/14/06

Corona, CA 92879 Attention: Rick Rees Report Number: IPB1403

Received: 02/14/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1403-21 (PSZB-56-1 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17098	0.040	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1403-24 (PSZB-57-10 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17098	4.0	9.9	99.8	2/17/2006	2/21/2006	



Corona, CA 92879

Attention: Rick Rees

250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB1403

Sampled: 02/14/06

Received: 02/14/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B17097 Extracted: 02/17/06										
Blank Analyzed: 02/17/2006 (6B17097-E	BLK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 02/17/2006 (6B17097-BS	51)									
Perchlorate	0.515	0.040	mg/kg	0.500		103	85-115			
Matrix Spike Analyzed: 02/17/2006 (6B	17097-MS1)	/			Source: I	PB1403-0	6			
Perchlorate	0.541	0.040	mg/kg	0.499	ND	108	80-120			
Matrix Spike Dup Analyzed: 02/17/2006		Source: I	PB1403-0	6						
Perchlorate	0 531	0.040	mg/kg	0 499	ND	106	80-120	2	20	
Batch: 6B17098 Extracted: 02/17/06										
Blank Analyzed: 02/18/2006 (6B17098-F	BLK1)									
Perchlorate	ND	0.040	mg/kg							,
LCS Analyzed: 02/18/2006 (6B17098-B5	S1)									
Perchlorate	0.520	0 040	mg/kg	0 500		104	85-115			
Matrix Spike Analyzed: 02/18/2006 (6B	17098-MS1)				Source: I	PB1403-0	1			
Perchlorate	0 537	0.040	mg/kg	0.499	ND	108	80-120			
Matrix Spike Dup Analyzed: 02/18/2006	6 (6B17098-M	ISD1)			Source: 1	PB1403-0	1			
Perchlorate	0.536	0.040	mg/kg	0.499	ND	107	80-120	0	20	



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1403

Sampled: 02/14/06

Received: 02/14/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Sampled: 02/14/06

Corona, CA 92879

Received: 02/14/06

Attention: Rick Rees

Report Number: IPB1403

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

CHAIN-OF-CUSTODY RECORD

COR 10114

PROJECT NAME. AEROJET-AISA	PERKIN ELMER ASC		DATE =/14/86	PAGE OF]			
PROJECT NUMBER 7/90,004 1.7	LABORATORY NAME DELMAR	CLIENT INFORMATION AEROJET-AISA	REPORTING REQUIREMENTS				
RESULTS TO G. RICHARD REES	LABORATORY ADDRESS			A STATE OF THE PROPERTY OF THE			
TURNAROUND TIME STANDARD	IRVINE'CA 9264		IPB 1403				
SAMPLE SHIPMENT METHOD	LABORATORY CONTACT PATTE MATA		GEOTRACKER REQUIRED YES (NO)				
COURTER	LABORATORY PHONE NUMBER		SITE SPECIFIC GLOBAL ID NO				
SAMPLERS (SIGNATURE):	ANALY	SES					
Kithe	S DAY T ORWAGODO		Water (W), Olber (O)	MASD of Containers of Containers			
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2/14/06 9:43 PSZB-50-40	XX	LL	11 5	X 1 STAY TURNABUND			
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PRINTED NAME	PRINTED NAME	Corona, Californ		Ceomatrix			
COMPANY	COMPANY	Tel 951.273.7400 I	Fax 951.273.7420	- Comucin			

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COMPANY			1		COMPANY:		1				Tel				California 92879-1363 400 Fax 951.273.7420 Geomatrix											



LABORATORY REPORT

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Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa 007190.004.1.7

Sampled: 02/14/06-02/15/06

Received: 02/15/06 Issued: 03/01/06 19:17

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB1537-01	. PSZB-57-15	Soil
IPB1537-02	PSZB-57-20	Soil
IPB1537-03	PSZB-57-25	Soil
IPB1537-04	PSZB-57-30	Soil
IPB1537-05	PSZB-57-35	Soil
IPB1537-06	PSZB-57-40	Soil
IPB1537-07	PSZB-51A-15	Soil
IPB1537-08	PSZB-51A-20	Soil
IPB1537-09	PSZB-51A-25	Soil
IPB1537-10	PSZB-51A-30	Soil
IPB1537-11	PSZB-51A-35	Soil





Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB1537

Sampled. 02/14/06-02/15/06

Received: 02/15/06

LABORATORY ID	CLIENT ID	MATRIX
IPB1537-12	PSZB-51A-40	Soil
IPB1537-13	PSZB-56-7.5	Soil
IPB1537-14	PSZB-56-10	Soil
IPB1537-15	PSZB-56-15	Soil
IPB1537-16	PSZB-56-20	Soil
IPB1537-17	PSZB-56-25	Soil
IPB1537-18	PSZB-56-30	Soil
IPB1537-19	PSZB-56-35	Soil
IPB1537-20	PSZB-56-40	Soil

Reviewed By:

Del Mar Analytical, Irvine Sushmitha Reddy For Patty Mata

Project Manager



Project ID. Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1537

Sampled: 02/14/06-02/15/06

Received: 02/15/06

INORGANICS

		111010	Granico					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1537-01 (PSZB-57-15 - Soil) Reporting Units: ug/kg	•			Sampled	02/14/06		,	
Perchlorate	EPA 314.0 MOD.	6B17098	40	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1537-02 (PSZB-57-20 - Soil) Reporting Units: ug/kg)			Sampled	02/15/06			
Perchlorate	EPA 314.0 MOD.	6B17100	40	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1537-03 (PSZB-57-25 - Soil Reporting Units: ug/kg)			Sampled	: 02/15/06			
Perchlorate	EPA 314.0 MOD.	6B17100	40	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1537-04 (PSZB-57-30 - Soil Reporting Units: ug/kg				-	: 02/15/06			
Perchlorate	EPA 314.0 MOD.	6B17097	40	ND	0.995	2/17/2006	2/17/2006	
Sample ID: IPB1537-05 (PSZB-57-35 - Soil Reporting Units: ug/kg	•			•	: 02/15/06			
Perchlorate	EPA 314.0 MOD.	6B17097	40	ND	0.998	2/17/2006	2/17/2006	
Sample ID: IPB1537-06 (PSZB-57-40 - Soil Reporting Units: ug/kg)	,		Sampled	: 02/15/06			
Perchlorate	EPA 314.0 MOD.	6B17097	40	ND	0.995	2/17/2006	2/17/2006	
Sample ID: IPB1537-07 (PSZB-51A-15 - So Reporting Units: ug/kg	oil)			Sampled	: 02/15/06			
Perchlorate	EPA 314.0 MOD.	6B17100	40	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1537-08 (PSZB-51A-20 - So Reporting Units: ug/kg	oil)			Sampled	: 02/15/06			
Perchlorate	EPA 314.0 MOD.	6B17100	40	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1537-09 (PSZB-51A-25 - So Reporting Units: ug/kg	oil)			Sampled	: 02/15/06			
Perchlorate	EPA 314.0 MOD.	6B17100	40	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1537-10 (PSZB-51A-30 - Se Reporting Units: ug/kg	oil)			Sampled	: 02/15/06			
Perchlorate	EPA 314.0 MOD.	6B17097	40	ND	0.998	2/17/2006	2/18/2006	



Project ID. Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1537

Sampled: 02/14/06-02/15/06 Received: 02/15/06

INORGANICS

		mon	GAITICS								
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers			
Sample ID: IPB1537-11 (PSZB-51A-35 - Reporting Units: ug/kg	Soil)			Sampled	: 02/15/06						
Perchlorate	EPA 314.0 MOD.	6B17097	40	ND	1	2/17/2006	2/18/2006				
Sample ID: IPB1537-12 (PSZB-51A-40 - : Reporting Units: ug/kg	Soil)			Sampled	: 02/15/06						
Perchlorate	EPA 314.0 MOD.	6B17097	40	ND	0.99	2/17/2006	2/18/2006				
Sample ID: IPB1537-13 (PSZB-56-7.5 - S Reporting Units: ug/kg	oil)			Sampled	: 02/15/06						
Perchlorate	EPA 314.0 MOD.	6B17100	40	ND	0.998	2/17/2006	2/18/2006				
Sample ID: IPB1537-14 (PSZB-56-10 - So Reporting Units: ug/kg	oil)			Sampled	: 02/15/06						
Perchlorate	EPA 314.0 MOD.	6B17100	40	ND	0.995	2/17/2006	2/18/2006				
Sample ID: IPB1537-15 (PSZB-56-15 - Se Reporting Units: ug/kg	oil)			Sampled	: 02/15/06						
Perchlorate	EPA 314.0 MOD.	6B17100	40	ND	0.998	2/17/2006	2/18/2006				
Sample ID: IPB1537-16 (PSZB-56-20 - Se Reporting Units: ug/kg	oil)			Sampled	: 02/15/06						
Perchlorate	EPA 314.0 MOD.	6B17100	40	ND	0.998	2/17/2006	2/20/2006				
Sample ID: IPB1537-17 (PSZB-56-25 - Se Reporting Units: ug/kg	oil)			Sampled	: 02/15/06						
Perchlorate	EPA 314.0 MOD.	6B17100	40	ND	0.998	2/17/2006	2/20/2006				
Sample ID: IPB1537-18 (PSZB-56-30 - S Reporting Units: ug/kg	oil)			Sampled	1: 02/15/06						
Perchlorate	EPA 314.0 MOD.	6B17097	40	ND	1	2/17/2006	2/18/2006				
Sample ID: IPB1537-19 (PSZB-56-35 - S Reporting Units: ug/kg	oil)			Sampled	l: 02/15/06						
Perchlorate	EPA 314.0 MOD.	6B17097	40	ND	0.995	2/17/2006	2/18/2006				
Sample ID: IPB1537-20 (PSZB-56-40 - S Reporting Units: ug/kg	oil)			Sampled	1: 02/15/06						
Perchlorate	EPA 314.0 MOD.	6B17097	40	ND	0.998	2/17/2006	2/18/2006				



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID. Aerojet Azusa

007190.004.1.7

Report Number: IPB1537

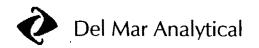
Sampled: 02/14/06-02/15/06

Received: 02/15/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B17097 Extracted: 02/17/06										
Blank Analyzed: 02/17/2006 (6B17097-B	SLK1)									
Perchlorate	ND	40	ug/kg						-	
LCS Analyzed: 02/17/2006 (6B17097-BS	51)									
Perchlorate	515	40	ug/kg	500		103	85-115			
Matrix Spike Analyzed: 02/17/2006 (6B)	17097-MS1)				Source: I	PB1403-0	6	,		
Perchlorate	541	40	ug/kg	499	ND	108	80-120			
Matrix Spike Dup Analyzed: 02/17/2006	6 (6B17097-N	ISD1)			Source: I	PB1403-0	6			
Perchlorate	531	40	ug/kg	499	ND	106	80-120	2	20	
Batch: 6B17098 Extracted: 02/17/06										
Blank Analyzed: 02/18/2006 (6B17098-E	BLK1)									
Perchlorate	ND	40	ug/kg							
LCS Analyzed: 02/18/2006 (6B17098-BS	S1)									
Perchlorate	520	40	ug/kg	500		104	85-115			
Matrix Spike Analyzed: 02/18/2006 (6B	17098-MS1)				Source: I	PB1403-0	1			•
Perchlorate	537	40	ug/kg	499	ND	108	80-120			
Matrix Spike Dup Analyzed: 02/18/2000	6 (6B17098-N	ASD1)			Source: 1	PB1403-0)1			
Perchlorate	536	40	ug/kg	499	ND	107	80-120	0	20	•
Batch: 6B17100 Extracted: 02/17/06										
Blank Analyzed: 02/18/2006 (6B17100-l	RLK1)									
Perchlorate	ND ND	40	ug/kg							



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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1537

Sampled: 02/14/06-02/15/06

Received: 02/15/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B17100 Extracted: 02/17/06										
LCS Analyzed: 02/18/2006 (6B17100-B	SI)									
Perchlorate	510	40	ug/kg	500		102	85-115			
Matrix Spike Analyzed: 02/18/2006 (6B	17100-MS1)				Source: I	PB1537-0	2			
Perchlorate	566	40	ug/kg	499	92	112	80-120			
Matrix Spike Dup Analyzed: 02/18/200	6 (6B17100-N	1SD1)			Source: 1	PB1537-0	2			
Perchlorate	549	40	ug/kg	499	92	108	80-120	3	20	



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St , Suite B 120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Attention: Rick Rees

Project ID: Aerojet Azusa

007100 00417

250 East Rincon Street, Suite 204 Corona, CA 92879 007190.004.1.7

Report Number: IPB1537

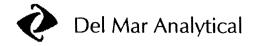
Sampled: 02/14/06-02/15/06

Received: 02/15/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 F. Cooley Dr., Suite A. Colton, CA 92324 (909) 370-4667. FAX (909) 370-1046. 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204 Corona, CA 92879

007190.004 1.7 Report Number: IPB1537

Sampled: 02/14/06-02/15/06

Received: 02/15/06

Attention: Rick Rees

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California	
EPA 314.0 MOD.	Soil	N/A	N/A	

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www testamericainc com

CHAIN-OF-CUSTODY RECORD

IPB1537 COR 10116

PROJECT NAME. AERIJET-AISA	PERKINELMER ACC		DATE: 2/15/66	PAGE / OF 3
PROJECT NUMBER 7/90.004 1.7	LABORATORY NAME DEL MAR	CLIENT INFORMATION ALAUJET-		
RESULTS TO G. RICHARD REES	LABORATORY ADDRESS:			The state of the s
TURNAROUND TIME STANDAFD	IRVINE CA 42614			
SAMPLE SHIPMENT METHOD	LABORATORY CONTACT		GEOTRACKER REQUIRED	YES NO
COURTER	LABORATORY PHONE NUMBER		SITE SPECIFIC GLOBAL ID NO	`
SAMPLERS (SIGNATURE):	ANALY	'SES		
SAMPLE	EPA 314 Surynsupain		Sol (S), Waler (W), Other (O) Filtered Freservative Type	MSD Of Containers
DATE TIME NUMBER	5 m 3		CONTAINER (%) No de la CONTAINER TYPE AND SIZE	Pago of ADDITIONAL COMMENTS
7/14/06 16:31 PSZB-57-15	X		LASS 402 5	
2/15/06 7:06 PSZB 57-20	X		11 11 5	XII
2/15/06 7:44 PSZB-57-25	X		to a S	X
2/15/06 8:02 PSZB-57-3C	XX		it it S	X 1 5 DAY TURMARETUS
1/15/06 8:27 PS 28-57-35	XX		11 11 5	X 1 5 DAY TUANAR OUD
2/15/06 8:31 1828-57-40	хx		(1 11 5	X 1 5 DAY TORMAROLDS
2/15/06 10'35 PSZB-51A-15	X		11 11 5	X
2/15/06 10:46 PSZB-SIA-20	х		11 11 5	X I
2/15/06 10:55 PSZB-51A-25	X		11 11 5	X
2/15/06 11:09 PSZ8-51A-30	XX		11 11 5	X I SDAY TURNAROUS
2115/06 11:18 PSZB-51A-35	xX		11 11 5	X 5 DAY TURNARGLED
2/15/06 11:21 PSZB-51A-40	XX		11 11 5	X I SDAY TUANAROUND
2/15/06 14:41 PSZB-56-7.5	χ		ic 1. 5	×
2/15/06 14:51 PSZB-56-10	X		u u s	XII
2115/66 14:50 7528-56-15	X		it us	X I EN
	RECEIVED BY		OF CONTAINERS (5	
SIGNATURE THE PRINTED NAME KURT ZETLER	Mulis leum	02/ SAMPLING COM	MENTS.	
PRINTED NAME KURT ZETLER	PRINTED NAME:	15/164		
COMPANY GERMATASX	MAG AN	106		
SIGNOURE (Creum 02/	SIGNATURE:			
PRINTED NAME: 15/ 18/5	PANTED MALE HELTON	1/15/18.		
COMPANY MUR M. 1060 -	COMPANY De Way	106 15		
SIGNATURE	SIGNATURE	1 '1 1	Rincon Street, Suite 204	
PRINTED NAME	PRINTED NAME.	-		∝ Geomatrix
COMPANY,	COMPANY	Tel 951.273	.7400 Fax 951.273.7420	

@30

COR 1011:

PROJECT NAME: AERLIGET- AIS A PE	exkinelmer acc		DATE 2/15/66 PAGE 2 OF 3	
PROJECT NUMBER 7/90 CC+ 1,7	LABORATORY NAME DEL MAR	CLIENT INFORMATION AERC JET - ALSA	REPORTING REQUIREMENTS	
RESULTS TO (- D TT I AD)	LABORATORY ADDRESS			
TURNAROUND TIME STANDARD	TRUTNE CA 92614			
SAMPLE SHIPMENT METHOD	LABORATORY CONTACT FATTE MATT LABORATORY PHONE NUMBER 14 - 161-10 A R		GEOTRACKER REQUIRED YES NO.	
COLRIER	LABORATORY PHONE NUMBER		SITE SPECIFIC GLOBAL ID NO	
SAMPLERS (SIGNATURE):	ANALY	SES	Total con edition to	
SAMI LENS (O'ONATONE).			ar (W). Other (O) Other (Ype	
SAMPLE NUMBER	5 DAY TLYDARD		MOITIDDA of Conta	
i		GLASS		3
2/15/06 15:21 PSZB-56-20		ECASS		
2/15/06 15:27 PS2B-66-25	 \tilde{			
2/15/06 15:3x PSZB-56-3c 2/15/06 15:47 PSZB 56-35	XX	11		
2/15/06 15:49 PSEB-56-40	XX		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
2/10/08 /3-14 /1320-56 40	 ^ ^ - - - -		16 S X I STAY TVANARE	666
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DEL MOUSE DAY	BECEIVED BY:	DATE TIME TOTAL NUMBER OF CONTA	MNERS: E	-
	RECEIVED BY:	DATE TIME SAMPLING COMMENTS:		\dashv
PRINTED NAME KURT ZETLER	PRINTED NAME	15/164		-
PRINTED NAME KURT ZETLER COMPANY LEDMATRIX	COMPAND	16		
GEOMATRIX	SIGNATURE AND	 		-
MINTED MAME / A -	PRIMEDISANE	15/ 18:		_
PRINTED NAME OF COMPANY MAN AN	PRINTED TAME TYMATION COMPANY.	106 15		
SIGNATURE	SIGNATURE: De May			\dashv
PRINTED NAME	PRINTED NAME	250 East Rincon S Corona, California		
COMPANY.	COMPANY	Tel 951.273.7400 F		•
	@30			



LABORATORY REPORT

Prepared For: Geom

Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004 1.7

Sampled: 02/16/06 Received: 02/16/06

SOLUTE, PARAGE AND LANGUAGE OF LINE WEST STORES THE FOR THE START OF THE PARAGE LINE STARTS AND THE STARTS AND

Issued: 03/04/06 16:29

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight hasis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT:

Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES:

All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report

PRESERVATION:

Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA:

All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Only the normal TAT perchlorate sample results are included in this report. All rush results were sent

2/22/06.

SUBCONTRACTED:

No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB1646-01	PSZB-58-7.5	Soil
IPB1646-02	PSZB-58-10	Soil
IPB1646-03	PSZB-58-15	Soil
IPB1646-04	PSZB-58-20	Soil
IPB1646-05	PSZB-58-25	Soil
IPB1646-09	PSZB-59-7.5	Soil
IPB1646-10	PSZB-59-10	Soil
IPB1646-11	PSZB-59-15	Soil
IPB1646-12	PSZB-59-20	Soil
IPB1646-13	PSZB-59-25	Soil

Reviewed By:

Del Mar Analytical, Irvine

Michele Chamberlin For Patty Mata

Michele Chamberan

Project Manager



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 · Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1646

Sampled: 02/16/06 Received: 02/16/06

INORGANICS

		INOR						
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1646-01 (PSZB-58-7.5 - Soil Reporting Units: mg/kg Perchlorate) EPA 314.0 MOD.	6B17100	0.040	0.64	0.998	2/17/2006	2/20/2006	
Sample ID: IPB1646-02 (PSZB-58-10 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17100	0.040	0.15	0.995	2/17/2006	2/20/2006	
Sample ID: IPB1646-03 (PSZB-58-15 - Soit) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17100	0.040	ND	0.998	2/17/2006	2/21/2006	
Sample ID: IPB1646-04 (PSZB-58-20 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17100	0.040	ND	0.998	2/17/2006	2/20/2006	
Sample ID: IPB1646-05 (PSZB-58-25 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17100	0.040	ND	0.998	2/17/2006	2/21/2006	
Sample ID: IPB1646-09 (PSZB-59-7.5 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17100	0.040	ND	0.995	2/17/2006	2/20/2006	
Sample ID: IPB1646-10 (PSZB-59-10 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17100	0 040	ND	0.995	2/17/2006	2/20/2006	
Sample ID: IPB1646-11 (PSZB-59-15 - Soil Reporting Units: mg/kg Perchlorate) EPA 314.0 MOD.	6B17100	0.040	ND	0.995	2/17/2006	2/20/2006	
Sample ID: IPB1646-12 (PSZB-59-20 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17100	0.040	ND	0.995	2/17/2006	2/20/2006	
Sample ID: IPB1646-13 (PSZB-59-25 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17100	0.040	ND	0.995	2/17/2006	2/21/2006	

Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata Project Manager



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID. Aerojet Azusa

007190.004.1.7

Report Number: IPB1646

Sampled: 02/16/06

Received: 02/16/06

METHOD BLANK/QC DATA

INORGANICS

Qualifiers
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Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata Project Manager



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261 1022 FAX (949) 260-3297 1014 E. Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785 0043 FAX (480) 785 0651 2520 E Suinset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Sampled: 02/16/06

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1646

Received: 02/16/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Collon, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South S1st St , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E, Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879

Report Number: IPB1646

Sampled: 02/16/06 Received: 02/16/06

Attention: Rick Rees

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	N/A

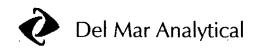
Nevada and NELAP provide analyte specific accreditations Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www testamericainc.com

Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata Project Manager

COMPANY.

7.98/646 COR 10118 CHAIN-OF-CUSTODY RECORD PERKINELMER ACC PROJECT NAME AEROJET -AISA PAGE / OF A LABORATORY NAME DEL MAR CLIENT INFORMATION AERCSET-AISH PROJECT NUMBER 7140 664 1.7 REPORTING REQUIREMENTS LABORATORY ADDRESS RESULTS TO G RICHARD NEES IRVINE CA 42614 LABORATORY CONTACT
PATTE MATA
LABORATORY PHONE NUMBER
949-161-1022 (Na GEOTRACKER REQUIRED 11 CLIRIER **ANALYSES** SAMPLERS (SIGNATURE): Ģ With Si 3 No. of Contain EPA SAMPLE CONTAINER **ADDITIONAL** ž DATE TIME NUMBER TYPE AND SIZE COMMENTS X 7,36 7528-58-7.5 S 2116/04 GLASS 402 5 -2/16/64 8:01 X PSZB-58-10 2/16/06 8:29 1528-53-15 X \$ 1 Χ ς. - - 2116106 9: +0 PSZB-58-Q6 W U d 2/16/06 9:11 17528-53-25 5 × ٦ŧ -2/16/06 9:25 P328-58-30 5 X ıŧ 5 DAY TURMAMUNO -- 2/16/06 7:36 8528-58-35 5 ١. (. 1 5 DAY TURNARCUND --- 2/16/06 9:52 PSZB-58-40 , (5 u 1 5 DAY TURNAMUUS 5 - 2/1406 11:52 PSZB-57-7.5 χ Ħ u - 2116/06 11'5x PSZB-54-10 ς 11 X --- 2/16/06 A:05 PSZB-59-15 ς 11 11 - 2/16/06 12:25 PSZB-59-20 χ ξŧ ς X 11 - 2/16/06 12:36 PSZB-59-25 14 S 11 - 12/16/06 12:28 PSZB-59-30 Ħ ٦t 5 DAY TOKNAROUND - 2/16/06 15:23 PSZB-57-75 S S DAY TURNARCUJA DATE TIME RECEIVED BY: DATE TIME TOTAL NUMBER OF CONTAINERS: RELINQUISHED BY: SAMPLING COMMENTS PRINTED NAME: KURT ZEILUR 1574. COMPANY BECMATRIX 7161 SIGNATURE: 250 East Rincon Street, Suite 204 PRINTED NAME PRINTED NAME **Geomatrix** Corona, California 92879-1363 Tel 951.273.7400 Fax 951.273.7420 COMPANY:

COR 10119 CHAIN-OF-CUSTODY RECORD PROJECT NAME: AERU JET-AISA PERKINELMER ACC LABORATORY NAME DEL NAR PROJECT NUMBER 7/96.664 1.7 AEXOJET-AISA LABORATORY ADDRESS RESULTS TO G. RICHARD REES TURNAROUND TIME 5 DAY TURN ARUL SO IRVINE OA 92614 LABORATORY CONTACT
ATTY MATA
LABORATORY PHONE NUMBER
144-161-1612 SAMPLE SHIPMENT METHOD (NO) GEOTRACKER REQUIRED 1 CCKIER SITE SPECIFIC GLOBAL ID NO **ANALYSES** SAMPLERS (SIGNATURE): TUP FAMELOS 2173 of Containers S DAY 的 SAMPLE CONTAINER **ADDITIONAL** NUMBER TYPE AND SIZE COMMENTS DATE TIME 2/14/06/15:27 PSZB-59-40 Х (SLASS 40'Z 5 DAY TURNARWED TOTAL NUMBER OF CONTAINERS: DATE TIME DATE TIME RECEIVED BY: **RELINQUISHED BY:** 2/14/06 SAMPLING COMMENTS: 5 1546 7/16/0 /8:00 106 250 East Rincon Street, Suite 204 PRINTED NAME: **Geomatrix** PRINTED NAME. Corona, California 92879-1363 Tel 951.273.7400 Fax 951.273.7420 COMPANY COMPANY



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Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azùsa

007190.004.1.7

Sampled: 02/16/06 Received: 02/16/06 Issued: 02/22/06 12:17

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Only the rush perchlorate sample results are included in this report. All other results will be sent under

separate cover when complete.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB1646-06	PSZB-58-30	Soil
IPB1646-07	PSZB-58-35	Soil
IPB1646-08	PSZB-58-40	Soil
IPB1646-14	PSZB-59-30	Soil
IPB1646-15	PSZB-59-35	Soil
IPB1646-16	PSZB-59-40	Soil

Reviewed By:

Del Mar Analytical, Irvine



Project ID: Aerojet Azusa

007190.004.1.7

THE THE THE THE THE PERSON OF THE THE THE THE THE

Corona, CA 92879

Report Number: IPB1646

Sampled: 02/16/06 Received: 02/16/06

Attention: Rick Rees

250 East Rincon Street, Suite 204

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1646-06 (PSZB-58-30 - Soil Reporting Units: mg/kg)							
Perchlorate	EPA 314.0 MOD.	6B17097	0.040	ND	1	2/17/2006	2/18/2006	
Sample ID: IPB1646-07 (PSZB-58-35 - Soil)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17097	0.040	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1646-08 (PSZB-58-40 - Soil)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17097	0.040	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1646-14 (PSZB-59-30 - Soil)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17097	0.040	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1646-15 (PSZB-59-35 - Soil	1)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17097	0.040	ND	0.998	2/17/2006	2/18/2006	
Sample ID: IPB1646-16 (PSZB-59-40 - Soil	1)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B17097	0.040	ND	0.998	2/17/2006	2/18/2006	



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879
Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1646

Sampled: 02/16/06

Received: 02/16/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B17097 Extracted: 02/17/06										
Blank Analyzed: 02/17/2006 (6B17097-B	LK1)									
Perchlorate	ND	0 040	mg/kg							•
LCS Analyzed: 02/17/2006 (6B17097-BS	1)									
Perchlorate	0 515	0.040	mg/kg	0.500		103	85-115			
Matrix Spike Analyzed: 02/17/2006 (6B1	7097-MS1)				Source: I	PB1403-0	6			
Perchlorate	0.541	0 040	mg/kg	0 499	ND	108	80-120			
Matrix Spike Dup Analyzed: 02/17/2006	(6B17097-M	(SD1)			Source: I	PB1403-0	6			
Perchlorate	0 531	0 040	mg/kg	0.499	ND	106	80-120	2	20	



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370 4667 FAX (909) 370-1046
9830 South S1st St , Suite B-120, Phoenix, AZ 85044 (480) 785

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1646

Sampled: 02/16/06

Received: 02/16/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB1646

Sampled: 02/16/06

Received: 02/16/06

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www dmalabs.com.

114

7 PP 16:46 COR 10118 CHAIN-OF-CUSTODY RECORD PETAKITUELMEN ACC PROJECT NAME: AEROJET -AISA LABORATORY NAME DEL MAR CLIENT INFORMATION AERCSET-ALSA PROJECT NUMBER 7140.664 1.7 LABORATORY ADDRESS RESULTS TO G RICHARD NEES IRVINE CA 92614 LABORATORY CONTACT
PATTE MATTA
LABORATORY PHONE NUMBER
949-161-1012 SAMPLE SHIPMENT METHOD (Ng GEOTRACKER REQUIRED 11 CL RIER SITE SPECIFIC GLOBAL ID NO **ANALYSES** SAMPLERS (SIGNATURE): Ģ WAY ? TUNKAR ¥ of Contain ES A SAMPLE CONTAINER Cooled **ADDITIONAL** <u>'</u> TIME NUMBER DATE TYPE AND SIZE COMMENTS X 21161 64 7.36 7528-58-7.5 GLASS 402 5 5 X 8:01 X -2116/64 PS2B-58-10 11 X \$ 2/16/06 8:29 PS 28-57-15 Х 11 11 X ς. -2116106 9: +0 PSZB-58-26 11 X d S X 9:11 17528-53-25 2/16/06 ١i -2116166 9:25 P328-58-30 X 5 ١ŧ X 5 DAY TURMAMUNO 11 -- 2/16/06 7:36 PSZ0-58-35 5 × 14 6. X 1 5 DAY TURNAROUND --- 2/16/06 9:52 PSZB-58-40 , (5 X 11 1 5 DAY TURNAHOUS 5 "- 2/1406 11:52 PSZB-57-7.5 χ u 11 - 2/16/06 11:5x PSZ8-54-10 X S X Ll 11 --- 2/16/06 12:05 PSZB-59-15 X 11 ς H -12/16/06 12:25 PSZB-59-20 (1 ς 11 X - 2116/06 12:36 PSZB-59-25 jį S 11 - 116/06 12:28 PSZB-59-30 W N 5 DAY TORNARGUAD - 2/16/06 15:23 PSZB-57-35 × S S DAY TURNARESUD TOTAL NUMBER OF CONTAINERS: DATE TIME DATE TIME RECEIVED BY: RELINQUISHED BY: SIGNATURE: رنده SAMPLING COMMENTS 14 PRINTED NAME: KURT ZEILDR 1534 COMPANY GECMATRIX 716/g, SIGNATURE 250 East Rincon Street, Suite 204 PRINTED NAME: PRINTED NAME: **Geomatrix** Corona, California 92879-1363 COMPANY Tel 951.273.7400 Fax 951,273,7420 COMPANY.

CHAIN-C	F-CUST	ODY REC	CORD																INP	164	1		(100	7	1	3119
PROJECT	NAME: A	EKLJET	-AIS	A PE	RK	INE	ELM	ER	AC											DATE. 2	116	100			\GE		· · · · · · · · · · · · · · · · · · ·
PROJECT NUM	BER 7/1/	0.004	1.7		LAE	ORATO	ORY N	AME (EL	NAI	R	CLIENT INFORMATION AERCJET-AISA					REPORTING RI										
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2	17	2			3.4	-														-	Water (W).		Preservative Type		0	of Containers	
DATE	TIME		MPLE JMBER		EPA	5 DAY													1	AINER ND SIZE	Soil (S), We Vapor (V), c	Filtered	Preserv	Cooled	MS/MSD	No. of C	ADDITIONAL COMMENTS
2/16/06	151.27	PSZB-4	5 9 -4	C	X	X,													GLASS	40'7	5			X		1	5 DAY TUANARUSO
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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 02/17/06 Received: 02/17/06 Issued: 02/24/06 16:39

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on see and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED. No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB1767-01	PSZB-55-7.5	Soil
IPB1767-02	PSZB-55-10	Soil
IPB1767-03	PSZB-55-15	Soil
IPB1767-04	PSZB-55-20	Soil
IPB1767-05	PSZB-55-25	Soil
IPB1767-06	PSZB-55-30	Soil
IPB1767-07	PSZB-55-35	Soil
IPB1767-08	PSZB-55-40	Soil
IPB1767-09	PSZB-65-7.5	Soil
IPB1767-10	PSZB-65-10	Soil
IPB1767-11	PSZB-65-15	Soil





Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

007190.004.1.7

Sampled: 02/17/06

Report Number: IPB1767

Received: 02/17/06

LABORATORY ID	CLIENT ID	MATRIX
IPB1767-12	PSZB-65-20	Soil
IPB1767-13	PSZB-65-25	Soil
IPB1767-14	PSZB-65-30	Soil
IPB1767-15	PSZB-65-35	Soil
IPR1767-16	PS7R_65_40	Soil

Reviewed By:

Del Mar Analytical, Irvine



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1767

Sampled: 02/17/06 Received: 02/17/06

INORGANICS

INORGANICS												
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers				
Sample ID: IPB1767-01 (PSZB-55-7.5 - Soi Reporting Units: mg/kg												
Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	0.998	2/20/2006	2/21/2006					
Sample ID: IPB1767-02 (PSZB-55-10 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	0.998	2/20/2006	2/21/2006					
Sample ID: IPB1767-03 (PSZB-55-15 - Soi Reporting Units: mg/kg												
Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	i	2/20/2006	2/21/2006					
Sample ID: IPB1767-04 (PSZB-55-20 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	0.998	2/20/2006	2/22/2006					
Sample ID: IPB1767-05 (PSZB-55-25 - Soi Reporting Units: mg/kg		(Danas				a 120 (200 f	0.001.0000					
Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND ·	0.995	2/20/2006	2/21/2006					
Sample ID: IPB1767-06 (PSZB-55-30 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	1	2/20/2006	2/21/2006					
Sample ID: IPB1767-07 (PSZB-55-35 - Soi	D											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	0.998	2/20/2006	2/21/2006					
Sample ID: IPB1767-08 (PSZB-55-40 - Soi Reporting Units: mg/kg												
Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	0.998	2/20/2006	2/21/2006					
Sample ID: IPB1767-09 (PSZB-65-7.5 - So Reporting Units: mg/kg Perchlorate	eil) EPA 314.0 MOD.	6B20098	0.040	ND	0,995	2/20/2006	2/21/2006					
Comple ID. IBD1747 10 (BC7B 45 10 C	:1\											
Sample ID: IPB1767-10 (PSZB-65-10 - So Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD	6B20098	0.040	ND	0.998	2/20/2006	2/21/2006	,				



Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004.1.7

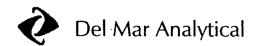
Report Number: IPB1767

Sampled: 02/17/06

Received: 02/17/06

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Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1767-11 (PSZB-65-15 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	0.995	2/20/2006	2/21/2006	
Sample ID: IPB1767-12 (PSZB-65-20 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	0.998	2/20/2006	2/21/2006	
Sample ID: IPB1767-13 (PSZB-65-25 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	0.998	2/20/2006	2/21/2006	
Sample ID: IPB1767-14 (PSZB-65-30 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	0.993	2/20/2006	2/21/2006	
Sample ID: IPB1767-15 (PSZB-65-35 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B20098	0.040	ND	0.995	2/20/2006	2/21/2006	
Sample ID: IPB1767-16 (PSZB-65-40 - Soil Reporting Units: mg/kg	•	ch-0000	0.040			* * * * * * * * * *	8/81/868	
Perchlorate	EPA 314.0 MOD.	6B20098	0 040	ND	0.995	2/20/2006	2/21/2006	



250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190 004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB1767

Sampled: 02/17/06

Received: 02/17/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B20098 Extracted: 02/20/06										
Blank Analyzed: 02/21/2006 (6B20098-B.	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 02/21/2006 (6B20098-BS	1)									
Perchlorate	0.564	0.040	mg/kg	0.500		113	85-115			
Matrix Spike Analyzed: 02/21/2006 (6B2	0098-MS1)				Source: I	PB1767-0	6			
Perchlorate	0 544	0.040	mg/kg	0.499	ND	109	80-120			
Matrix Spike Dup Analyzed: 02/21/2006	(6B20098-MSI	D1)			Source: I	PB1767-0	6			,
Perchlorate	0.567	0 040	mg/kg	0 499	ND	114	80-120	4	20	



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1767

Sampled. 02/17/06

Received: 02/17/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E. Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South S1st St , Suite B-120, Phoenis, AZ 85044 (480) 785-0043 FAX (480) 785-0651 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona 250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number IPB1767

Sampled: 02/17/06

Received: 02/17/06

Certification Summary

Del Mar Analytical, Irvine

Method Matrix Nelac

EPA 314.0 MOD. Soil N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

California

N/A

PRINTED NAME

COMPANY:

COR 10120 CHAIN-OF-CUSTODY RECORD JUBITUT DATE. 2/17/06 PAGE ; PROJECT NAME: AEROSET-AISA PERKIN ELHER ACL LABORATORY NAME DEL MAR CLIENT INFORMATION AERESET - AISA PROJECT NUMBER 7/90 CC / 1.7 LABORATORY ADDRESS RESULTS TO G. A. L. CHARD REFS TURNAROUND TIME STANDARD IRVINE CA 92614 LABORATORY CONTACT
PACTE MATA SAMPLE SHIPMENT METHOD (NO) COLFIER LABORATORY PHONE NUMBER SITE SPECIFIC GLOBAL ID NO **ANALYSES** SAMPLERS (SIGNATURE): ないたのななのに 21/2 MS/MSD EFA SAMPLE CONTAINER **ADDITIONAL** DATE TIME NUMBER TYPE AND SIZE COMMENTS X 2117/06 7:13 PSZB-53-75 GLASS 402 2117/06 7:30 175 28-55-16 X 2117/06 7:43 PSZB-55-15 X 11 11 5 X Q/17/06 9:18 PSZ8-55-20 X S ¥. 11 X 5 X 2117/06 8; 31 PSZB-55-25 tl H X 2/17/06 8:41 1578-55-30 ς 11 5 DAY TURNARGOUD 16 2/17/06 9:02 PSZB-55-35 ς X 11 1 5 DAY TURNARIUND 11 S 2/17/06 9:06 PSZB 55-40 1 5 DAY TURNAROUND 16 , i 2117/06 10:59 PS 28-65-7.5 S 1) L 2/17/06 11:07 PSZB-65-10 X lı 11 2/17/06 11:13 PSZB-65-15 5 X 11 2/17/06 11:14 PSZB-65-20 į. 11 S 2117/06 11:27 PSZB-65-25 U () 2/17/06 11,36 PSZB-65-30 S Х lı ł: X 5 DAY TURMAREIN 2/17/06 12:40 PSZB-65-35 S 1 S DAY TURNARUM TOTAL NUMBER OF CONTAINERS: 15 DATE TIME RELINQUISHED BY: DATE TIME RECEIVED BY: PENTED NAME.

COMPANY D WATIO SAMPLING COMMENTS: 2/17/06 1638 SIGNATURE. 250 East Rincon Street, Suite 204

PRINTED NAME.

COMPANY:

Geomatrix

Corona, California 92879-1363

Tel 951,273,7400 Fax 951,273,7420

CHAIN-OF-CUSTODY RECORD

COR 10121

FROMETIEN THE C.Y. T. P. SEARCH TO C. A ZUMAKA AEE. TIGHINGROUP ACES. TIGHINGROUP AEE. TIGHINGROUP	PROJECT	NAME:	A ERO JET	- ALSA	PER	KIN	INELMER ACC										DATE : 117/86 PAGE 2 OF 2											
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PRINTED NAME Corona, California 92879-1363 Geomatrix	SIGNATURE			1		SIGNATURE:					+					250 1	Fac	t Rincon St	reet Suite	204	7				-			
COMPANY. Tel 951.273.7420 Fax 951.273.7420	PRINTED NAM	1E.	-	1		PRIN	TED	NAM	=				7				•							00	<u>_</u>	C	رما	nmatriv
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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 02/21/06 Received: 02/21/06 Issued: 02/28/06 13:26

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IPB1953-01	PSZB-53-I	Soil
IPB1953-02	PSZB-53-2	Soil
IPB1953-03	PSZB-53-5	Soil
IPB1953-04	PSZB-53-7.5	Soil
IPB1953-05	PSZB-53-10	Soil
IPB1953-06	PSZB-54-1	Soil
IPB1953-07	PSZB-54-2	Soil
IPB1953-08	PSZB-54-5	Soil
IPB1953-09	PSZB-54-7.5	· Soil
IPB1953-10	PSZB-54-10	Soil
IPB1953-11	PSZB-54-15	Soil
IPB1953-12	PSZB-54-20	Soil
IPB1953-13	PSZB-54-25	Soil
IPB1953-14	PSZB-54-30	Soil
IPB1953-15	PSZB-54-35	Soil
IPB1953-16	PSZB-54-40	Soil

Reviewed By:

Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata

Michile Chamberein

Project Manager



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1953

Sampled: 02/21/06

Received. 02/21/06

INORGANICS

		INOR	GANICS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1953-01 (PSZB-53-1 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	
Sample ID: IPB1953-02 (PSZB-53-2 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.995	2/23/2006	2/24/2006	
Sample ID: IPB1953-03 (PSZB-53-5 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	1	2/23/2006	. 2/24/2006	
Sample ID: IPB1953-04 (PSZB-53-7.5 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	
Sample ID: IPB1953-05 (PSZB-53-10 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	1	2/23/2006	2/24/2006	
Sample 1D: 1PB1953-06 (PSZB-54-1 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	
Sample ID: IPB1953-07 (PSZB-54-2 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	
Sample ID: IPB1953-08 (PSZB-54-5 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	
Sample ID: IPB1953-09 (PSZB-54-7.5 - Soi Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	
Sample ID: IPB1953-10 (PSZB-54-10 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0 040	ND	0.998	2/23/2006	2/24/2006	

Del Mar Analytical, IrvineMichele Chamberlin For Patty Mata
Project Manager



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon.Street, Suite 204

Report Number: IPB1953

Sampled. 02/21/06 Received: 02/21/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1953-11 (PSZB-54-15 - Soil Reporting Units: 'mg/kg)							
Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	
Sample ID: IPB1953-12 (PSZB-54-20 - Soil)		•					
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	
Sample ID: IPB1953-13 (PSZB-54-25 - Soil)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.995	2/23/2006	2/24/2006	
Sample ID: IPB1953-14 (PSZB-54-30 - Soil)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	
Sample ID: IPB1953-15 (PSZB-54-35 - Soil)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	
Sample ID: IPB1953-16 (PSZB-54-40 - Soil)							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B23090	0.040	ND	0.998	2/23/2006	2/24/2006	•



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB1953

Sampled: 02/21/06

Received: 02/21/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B23090 Extracted: 02/23/06										
Blank Analyzed: 02/24/2006 (6B23090-B	LK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 02/24/2006 (6B23090-BS	1)									
Perchlorate	0.517	0.040	mg/kg	0 500		103	85-115			
Matrix Spike Analyzed: 02/24/2006 (6B2	3090-MS1)				Source: I	PB1953-0	1			
Perchlorate	0.546	0 040	mg/kg	0 498	0.016	106	80-120			
Matrix Spike Dup Analyzed: 02/24/2006	(6B23090-M	ISD1)			Source: I	PB1953-0	1			
Perchlorate	0.545	0 040	mg/kg	0.499	0.016	106	80-120	0	20	

Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata Project Manager



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370 4667 FAX (909) 370-1046 9830 South 51st St , Suite 8-120, Phoenix, AZ 85044 (480) 785 0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

ND

250 East Rincon Street, Suite 204

Report Number: IPB1953

Sampled: 02/21/06

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DATA QUALIFIERS AND DEFINITIONS

Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South \$1st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

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Sampled: 02/21/06

Received. 02/21/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	Californi
EPA 314.0 MOD.	Soil	N/A	N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc com

Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata Project Manager

CHAIN-G	OF-CUS	TODY REC	ORD														I	PBIC	15	3 ,	C	COF	i	1(0122
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PROJECT NUM	BER 2141	1 1-338	7		LAB	ORATO	RY NAM	E DE	2 M	AR	CLIE	NT INF	ORMATI	ON	AEX	055	T-AISH	REPORTING R	EQUIRF	MENTS					
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CHAIN-OF-CUSTODY RECORD

COR 10123

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PROJECT NUM	BER 7198	004 13	7		LAE	ORAT	TORY	NAME	DC	LH	AK		CLIE	NI TH	FORMA	TION	AET	26%	ET AISA	REPOR	TING R	EQUIR	EMENI	S				
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COMPANY							el 951.273.7400 Fax 951.273.7420																					



LABORATORY REPORT

THE ALM OF THE TOTAL TOTAL CONTROL AND THE ANALYSIS OF THE ALM OF THE ALM OF THE ANALYSIS OF THE ALM OF THE AL

Prepared For: Geomatrix-Corona Project: Aerojet Azusa

250 East Rincon Street, Suite 204 007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

Sampled: 02/22/06 Received: 02/22/06 Issued: 03/08/06 17:12

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: All sample results are included in this report, even those previously reported under separate cover.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB2076-01	PSZB-53A-15	Soil
IPB2076-02	PSZB-53A-20	Soil
IPB2076-03	PSZB-53A-25	Soil
IPB2076-04	PSZB-53A-30	Soil
IPB2076-05	PSZB-53A-35	Soil
IPB2076-06	PSZB-53A-40	Soil
IPB2076-07	PIZB-06-5	Soil
IPB2076-08	PIZB-06-2.5	Soil
IPB2076-09	PIZB-06-1	Soil
IPB2076-10	PIZB-05-5	Soil



Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

 007190.004.1.7
 Sampled: 02/22/06

 IPB2076
 Received: 02/22/06

Corona, CA 92879 Attention: Rick Rees Report Number: IPB2076

LABORATORY ID	CLIENT ID	· MATRIX
IPB2076-11	PIZB-05-2.5	Soil
IPB2076-12	PIZB-05-1	Soil
IPB2076-13	PIZB-06-10	Soil
IPB2076-14	PIZB-06-7 5	Soil
IPB2076-15	PIZB-06-15	Soil
IPB2076-16	PIZB-06-20	Soil
IPB2076-17	PIZB-06-25	Soil
IPB2076-18	PSZB-68-5	Soil
IPB2076-19	PSZB-68-2.5	Soil
IPB2076-20	PSZB-68-1	Soil
IPB2076-21	PIZB-06-30	Soil
IPB2076-22	PIZB-06-35	Soil
IPB2076-23	PIZB-06-40	Soil
IPB2076-24	PSZB-69-5	Soil
IPB2076-25	PSZB-69-2.5	Soil
IPB2076-26	PSZB-69-1	Soil

Reviewed By:

Del Mar Analytical, Irvine



Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB2076

Sampled: 02/22/06

Received: 02/22/06

INORGANICS

I TORGALITES									
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: IPB2076-01 (PSZB-53A-15 - So Reporting Units: mg/kg Perchlorate	eil) EPA 314.0 MOD.	6B24098	0.040	ND	0.995	2/24/2006	2/25/2006		
Sample ID: IPB2076-02 (PSZB-53A-20 - So Reporting Units: mg/kg		0024070		, NO	0.773	2/24/2000	2,23,2000		
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	0.995	2/24/2006	2/25/2006		
Sample ID: IPB2076-03 (PSZB-53A-25 - So Reporting Units: mg/kg	oil)								
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006		
Sample ID: IPB2076-04 (PSZB-53A-30 - So Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006		
Sample ID: IPB2076-05 (PSZB-53A-35 - Se	oil)								
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006		
Sample ID: IPB2076-06 (PSZB-53A-40 - Se	oil)								
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006		
Sample ID: IPB2076-07 (PIZB-06-5 - Soil)									
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24098	0.040	0.30	0.998	2/24/2006	2/25/2006		
Sample ID: IPB2076-08 (PIZB-06-2.5 - Soil)									
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24098	0.20	1.2	5	2/24/2006	2/27/2006		
Sample ID: IPB2076-09 (PIZB-06-I - Soil) Reporting Units: mg/kg									
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	0.42	1	2/24/2006	2/25/2006		
Sample ID: IPB2076-10 (PIZB-05-5 - Soil)									
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24098	0 040	0.083	0.998	2/24/2006	2/25/2006	T.	

Del Mar Analytical, Irvine



Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB2076

Sampled: 02/22/06 Received: 02/22/06

INORGANICS

INORGANICS									
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: IPB2076-11 (PIZB-05-2.5 - Soi Reporting Units: mg/kg Perchlorate	I) EPA 314.0 MOD	6B24098	0.040	0.32	0 998	2/24/2006	2/25/2006		
Sample ID: IPB2076-12 (PIZB-05-1 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24099	0.040	0.29	1	2/24/2006	2/24/2006		
Sample ID: IPB2076-13 (PIZB-06-10 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24099	0.040	ND	0.998	2/24/2006	2/24/2006		
Sample ID: IPB2076-14 (PIZB-06-7.5 - Soi Reporting Units: mg/kg Perchlorate	I) EPA 314.0 MOD.	6B24099	0.040	0.040	0.998	2/24/2006	2/24/2006		
Sample ID: IPB2076-15 (PIZB-06-15 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24099	0.040	ND	0.998	2/24/2006	2/24/2006		
Sample ID: IPB2076-16 (PIZB-06-20 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24099	0.040	ND	0.998	2/24/2006	2/24/2006		
Sample ID: IPB2076-17 (PIZB-06-25 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24099	0.040	ND	1	2/24/2006	2/24/2006		
Sample ID: IPB2076-18 (PSZB-68-5 - Soil) Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24099	0.040	ND	1	2/24/2006	2/24/2006		
Sample ID: IPB2076-19 (PSZB-68-2.5 - So Reporting Units: mg/kg Perchlorate	i i) EPA 314.0 MOD.	6B24099	0.040	ND	0.995	2/24/2006	2/24/2006		
Sample ID: IPB2076-20 (PSZB-68-1 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD	6B24099	0.040	ND	1	2/24/2006	2/24/2006		

Del Mar Analytical, Irvine





Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB2076

Sampled: 02/22/06

Received. 02/22/06

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Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2076-21 (PIZB-06-30 - Soil) Reporting Units: mg/kg								
Perchlorate	EPA 314 0 MOD.	6B24099	0.040	ND	0 998	2/24/2006	2/24/2006	
Sample ID: IPB2076-22 (PIZB-06-35 - Soil) Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006	
Sample ID: IPB2076-23 (PIZB-06-40 - Soil) Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006	
Sample ID: IPB2076-24 (PSZB-69-5 - Soil) Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	6B24099	0.040	ND	0.998	2/24/2006	2/24/2006	
Sample ID: IPB2076-25 (PSZB-69-2.5 - Soil Reporting Units: mg/kg))							
Perchlorate	EPA 314.0 MOD.	6B24099	0.040	ND	0.995	2/24/2006	2/24/2006	
Sample ID: IPB2076-26 (PSZB-69-1 - Soil) Reporting Units: mg/kg								!
Perchlorate	EPA 314.0 MOD.	6B24099	0.20	ND	5	2/24/2006	2/26/2006	RL-1



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB2076

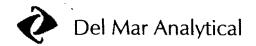
Sampled: 02/22/06

Received: 02/22/06

METHOD BLANK/QC DATA

INORGANICS

	Reporting			Spike Source			%REC		RPD Data	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B24098 Extracted: 02/24/06										
Blank Analyzed: 02/25/2006 (6B24098-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 02/25/2006 (6B24098-BS	51)									
Perchlorate	0.526	0 040	mg/kg	0.500		105	85-115			
Matrix Spike Analyzed: 02/25/2006 (6B24098-MS1)			Source: IPB2076-04							
Perchlorate	0.511	0.040	mg/kg	0 500	ND	102	80-120			
Matrix Spike Dup Analyzed: 02/25/2006 (6B24098-MSD1)				Source: I						
Perchlorate	0 507	0.040	mg/kg	0 500	ND	101	80-120	1	20	
Batch: 6B24099 Extracted: 02/24/06										
Blank Analyzed: 02/24/2006 (6B24099-BLK1)										
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 02/24/2006 (6B24099-BS	61)									
Perchlorate	0.513	0 040	mg/kg	0 500		103	85-115			
Matrix Spike Analyzed: 02/24/2006 (6B24099-MS1)				Source: 1	PB2076-1	2				
Perchlorate	0.888	0.040	mg/kg	0.498	0.29	120	80-120			
Matrix Spike Dup Analyzed: 02/24/2006	6 (6B24099-M	SD1)			Source: 1	PB2076-1	2			
Perchlorate	0.725	0.040	mg/kg	0 500	0.29	87	80-120	20	20	



17461 Denan Ave , Suite 100, Innne, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370 4667 FAX (909) 370-1046
9830 South S1st St , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785 0851
2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879

250 East Rincon Street, Suite 204

Report Number: IPB2076

Sampled: 02/22/06 Received: 02/22/06

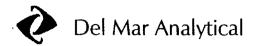
Attention: Rick Rees

DATA QUALIFIERS AND DEFINITIONS

RL-1 Reporting limit raised due to sample matrix effects.

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St , Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID. Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB2076

Sampled: 02/22/06

Received: 02/22/06

Certification Summary

Del Mar Analytical, Irvine

Method Matrix Nelac California
EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

PROJECT	NAME.	LERO JET	Γ- ΔΤ	SA 4:	JKK.	NEZ	MER	Ac		M. D				PB20 DATE.			PA		OF 2
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CCL	RIER				LABO	RATORY	61-10	NUMBER						SITE SPECIFIC		40			
SAMPL	ERS	(SIGNAT	TURE):					NAL'	YSES						Ī			
		SA	AMPLE		A 314	S DAY TUNMALD							CON	ITAINER	Sol (S), Waler (W), Vapor (V), or Other (O) Filtered	Preservative Type	led	MS/MSD No of Costanors	ADDITIONA
DATE	TIME	NL	JMBER	t	EPA	50							TYPE	AND SIZE	Soul Vap	Pres	Cooled	N Z	COMMENTS
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CHAIN-OF-CUSTODY RECORD

<u>COR 10125</u>

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COMPANY	·		<u> </u>	L	COV	/PAN	γ.				Tel 951.273.7400 Fax 951.273.7420															



LABORATORY REPORT

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Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 02/22/06-02/23/06

Received: 02/23/06 Issued: 03/01/06 19:53

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IPB2196-01	PIZB-06-45	Soil
IPB2196-02	PIZB-06-50	Soil
IPB2196-03	PIZB-06-60	Soil
IPB2196-04	PIZB-06-70	Soil
IPB2196-05	PIZB-06-80	Soil
IPB2196-06	PIZB-06-90	Soil
IPB2196-07	PIZB-06-100	Soil

Reviewed By:

Del Mar Analytical, Irvine

Michele Chamberlin For Patty Mata

Michile Chamberein

Project Manager



250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

Report Number: IPB2196

Corona, CA 92879 Attention: Rick Rees 007190.004.1.7

Sampled: 02/22/06-02/23/06

Received: 02/23/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2196-01 (PIZB-06-45 - Soil) Reporting Units: mg/kg	•			Sampled	: 02/22/06			
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006	
Sample ID: IPB2196-02 (PIZB-06-50 - Soil) Reporting Units: mg/kg	•			Sampled	: 02/23/06			
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006	
Sample ID: IPB2196-03 (PIZB-06-60 - Soil) Reporting Units: mg/kg	•			Sampled	: 02/23/06		,	
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	ı	2/24/2006	2/25/2006	
Sample ID: IPB2196-04 (PIZB-06-70 - Soil))			Sampled	: 02/23/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006	
Sample ID: IPB2196-05 (PIZB-06-80 - Soil) Reporting Units: mg/kg)			Sampled	: 02/23/06			
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006	
Sample ID: IPB2196-06 (PIZB-06-90 - Soil Reporting Units: mg/kg)			Sampled	: 02/23/06			
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006	
Sample ID: IPB2196-07 (PIZB-06-100 - So Reporting Units: mg/kg	ii)			Sampled	1: 02/23/06			
Perchlorate	EPA 314.0 MOD.	6B24098	0.040	ND	1	2/24/2006	2/25/2006	





Corona, CA 92879

Attention. Rick Rees

250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB2196

Sampled: 02/22/06-02/23/06

Received: 02/23/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B24098 Extracted: 02/24/06										
Blank Analyzed: 02/25/2006 (6B24098-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 02/25/2006 (6B24098-BS	1)									
Perchlorate	0.526	0 040	mg/kg	0 500		105	85-115			
Matrix Spike Analyzed: 02/25/2006 (6B2	4098-MS1)				Source: I	PB2076-0	4			
Perchlorate	0 511	0.040	mg/kg	0.500	ND	102	80-120			
Matrix Spike Dup Analyzed: 02/25/2006	(6B24098-M	SD1)			Source: I	PB2076-0	4			
Perchlorate	0.507	0 040	mg/kg	0 500	ND	101	80-120	1	20	





250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004.1.7

Sampled: 02/22/06-02/23/06

Corona, CA 92879 Attention: Rick Rees Report Number: IPB2196

Received: 02/23/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370 1046 9830 South S1st St , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID. Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number. IPB2196

Sampled: 02/22/06-02/23/06

Received: 02/23/06

Certification Summary

Del Mar Analytical, Irvine

MethodMatrixNelacCaliforniaEPA 314.0 MOD.SoilN/AN/A

Nevada and NELAP provide analyte specific accreditations Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

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17/12/196 COR 10126 CHAIN-OF-CUSTODY RECORD PROJECT NAME: AEROSET-AISA PERKINELMER AOC PAGE : CLIENT INFORMATION AERCSET-AISA LABORATORY NAME DEL MAR REPORTING REQUIREMENTS PROJECT NUMBER 7140. CC4 1.7 LABORATORY ADDRESS RESULTS TO (3. RICHARD REE S TURNAROUND TIME 5 DAY TURNAROUND INVINE CA 92614 SAMPLE SHIPMENT METHOD LABORATORY CONTACT **₹** GEOTRACKER REQUIRED YES COURTER LABORATORY PHONE NUMBER SITE SPECIFIC GLOBAL ID NO **ANALYSES** SAMPLERS (SIGNATURE): SORY TOAK HOUSES 3 DAY THE Cooled SAMPLE CONTAINER **ADDITIONAL** EZY TIME NUMBER TYPE AND SIZE DATE COMMENTS 2/22/06/18:11 PIZB-06-45 GLASS 407 5 Х 2/22/06 8:07 PIZB-06-50 2 2/23/06 15:08 PIZB-06-60 ς 11 1) 2/23/06 15:41 PIZB-06-70 u 10 X X ک 2/23/06 16:01 PIZ6-06-80 L 11 2/23/86 16.41 PIZB-66-90 5 d 2/23/06 17:14 PIZB 06:100 XXV H. TOTAL NUMBER OF CONTAINERS: 7 DATE TIME RECEIVED BY: 10 DATE TIME RELINQUISHED BY: SIGNATURE SIGNATURE: SAMPLING COMMENTS PRINTED NAME HELTE COMPANY DE MEY 12/0/19.10 COMPANY. GEOMATRIX PRINTED NAME: COMPANY: SIGNATURE: 250 East Rincon Street, Suite 204 PRINTED NAME: **Geomatrix** Corona, California 92879-1363

COMPANY.

Tel 951.273.7400 Fax 951.273.7420



LABORATORY REPORT

Prepared For:

Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 02/24/06 Received: 02/24/06 Issued. 03/04/06 16:37

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IPB2333-01	PIZB-05-7.5	Soil
IPB2333-02	PIZB-05-10	Soil
IPB2333-03	PIZB-05-15	Soil
IPB2333-04	PIZB-05-20	Soil
IPB2333-05	PIZB-05-25	Soil
IPB2333-06	PIZB-05-30	Soil
IPB2333-07	PIZB-05-35	Soil
IPB2333-08	PIZB-05-40	Soil
IPB2333-09	PIZB-05-45	Soil
IPB2333-10	PIZB-05-50	Soil
IPB2333-11	PIZB-05-60	Soil
IPB2333-12	PIZB-05-70	Soil
IPB2333-13	PIZB-05-80	Soil
IPB2333-14	PIZB-05-90	Soil
IPB2333-15	PIZB-05-100	Soil

Reviewed By:

Del Mar Analytical, IrvineMichele Chamberlin For Patty Mata

Michile Chamberein

Project Manager



250 East Rincon Street, Suite 204

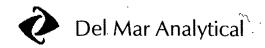
Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: 1PB2333

Sampled: 02/24/06 Received: 02/24/06

INORGANICS												
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers				
Sample ID: IPB2333-01 (PIZB-05-7.5 - So	il)											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	0.060	1	3/1/2006	3/2/2006					
Sample ID: IPB2333-02 (PIZB-05-10 - Soi Reporting Units: mg/kg	l)											
Perchlorate	EPA 314.0 MOD.	6C01096	0.040	0.065	1	3/1/2006	3/2/2006					
Sample ID: IPB2333-03 (PIZB-05-15 - Soi	il)											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	ND	1	3/1/2006	3/2/2006					
Sample ID: IPB2333-04 (PIZB-05-20 - Soi	il)											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	0.065	i	3/1/2006	3/2/2006					
Sample ID: IPB2333-05 (PIZB-05-25 - Soi	il)											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	0.12	1	3/1/2006	3/2/2006					
Sample ID: 1PB2333-06 (PIZB-05-30 - So	il)											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	0.075	1	3/1/2006	3/2/2006					
Sample ID: IPB2333-07 (PIZB-05-35 - So.	il)											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	0.064	1	3/1/2006	3/2/2006					
Sample ID: IPB2333-08 (PIZB-05-40 - So	il)											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	ND	1	3/1/2006	3/2/2006					
Sample.ID: IPB2333-09 (PIZB-05-45 - So	il)				-							
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01097	0.040	ND	1	3/1/2006	3/2/2006					
Sample ID: IPB2333-10 (PIZB-05-50 - So	il)											
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	ND	1	3/1/2006	3/1/2006					
retemorate	EFA 314.0 MOD.	0001090	0.040	ND	ı	3/1/2000	3/1/2000					



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB2333

Sampled: 02/24/06

Received: 02/24/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2333-11 (PIZB-05-60 - Soil Reporting Units: mg/kg)							
Perchlorate	EPA 314.0 MOD.	6C01096	0.040	ND	1	3/1/2006	3/1/2006	
Sample ID: IPB2333-12 (PIZB-05-70 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	ND	i	3/1/2006	3/1/2006	
Sample ID: IPB2333-13 (PIZB-05-80 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	ND	1	3/1/2006	3/1/2006	
Sample ID: IPB2333-I4 (PIZB-05-90 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01096	0.040	ND	1	3/1/2006	3/1/2006	
Sample ID: IPB2333-15 (PIZB-05-100 - So Reporting Units: mg/kg Perchlorate	il) EPA 314.0 MOD.	6C01096	0.040	ND	ı	3/1/2006	3/1/2006	



Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB2333

Sampled: 02/24/06 Received: 02/24/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C01096 Extracted: 03/01/06										
Blank Analyzed: 03/01/2006 (6C01096-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/01/2006 (6C01096-BS	1)									
Perchlorate	0 533	0.040	mg/kg	0.500		107	85-115			
Matrix Spike Analyzed: 03/01/2006 (6C0	1096-MS1)				Source: I	PB2333-10)			
Perchlorate	0 516	0.040	mg/kg	0 500	ND	103	80-120			
Matrix Spike Dup Analyzed: 03/01/2006	(6C01096-M	SD1)			Source: I	PB2333-10	0			
Perchlorate	0.537	0.040	mg/kg	0.500	ND	107	80-120	4	20	
Batch: 6C01097 Extracted: 03/01/06										
Blank Analyzed: 03/02/2006 (6C01097-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/03/2006 (6C01097-BS	(I)									
Perchlorate	0 541	0.040	mg/kg	0.500		108	85-115			
Matrix Spike Analyzed: 03/02/2006 (6C0)1097-MS1)				Source: I	PB2333-0	9			
Perchlorate	0.548	0.040	mg/kg	0 500	0.019	106	80-120			
Matrix Spike Dup Analyzed: 03/02/2006	(6C01097-M	SD1)			Source: I	(PB2333-0	9			
Perchlorate	0.549	0 040	mg/kg	0.500	0.019	106	80-120	0	20	



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB2333

Sampled: 02/24/06

Received: 02/24/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Suinset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB2333

Sampled: 02/24/06 Received: 02/24/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www testamericainc com

intect

4.





LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 02/27/06 Received: 02/27/06 Issued: 03/04/06 16:43

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 5°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Enclosed are results for all samples except IPB2465-07 and IPB2465-08. Results for those samples will be

sent under separate cover.

SUBCONTRACTED. No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB2465-01	PIZB-01-35	Soil
IPB2465-02	PIZB-01-40	Soil
IPB2465-03	PIZB-01-45	Soil
IPB2465-04	PIZB-01-50	Soil
IPB2465-05	PIZB-01-60	Soil
IPB2465-06	PIZB-01-70	Soil
IPB2465-09	PIZB-01-100	Soil

Reviewed By:

Del Mar Analytical, Irvine Michele Chamberlin For Patty Mata

Muchile Chamberein

Project Manager





Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB2465

Sampled: 02/27/06

Received: 02/27/06

INORGANICS

		mon	UANICS					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2465-01 (PIZB-01-35 - S Reporting Units: mg/kg	Soil)							
Perchlorate	EPA 314.0 MOD.	6C01097	0.040	0.94	1	3/1/2006	3/2/2006	
Sample ID: IPB2465-02 (PIZB-01-40 - S Reporting Units: mg/kg	Soil)							,
Perchlorate	EPA 314.0 MOD.	6C01097	0.40	2.1	10	3/1/2006	3/3/2006	
Sample ID: IPB2465-03 (PIZB-01-45 - S Reporting Units: mg/kg	•							
Perchlorate	EPA 314.0 MOD.	6C01097	0.20	1.7	5	3/1/2006	3/3/2006	
Sample ID: IPB2465-04 (PIZB-01-50 - S Reporting Units: mg/kg	Soil)							
Perchlorate	EPA 314.0 MOD.	6C01096	0.040	0.97	1	3/1/2006	3/1/2006	
Sample ID: IPB2465-05 (PIZB-01-60 - S Reporting Units: mg/kg	Soil)							
Perchlorate	EPA 314.0 MOD.	6C01096	0.040	0.88	1	3/1/2006	3/1/2006	
Sample ID: 1PB2465-06 (PIZB-01-70 - S Reporting Units: mg/kg	Soil)	~						
Perchlorate	EPA 314.0 MOD.	6C01096	0.040	0.71	1	.3/1/2006	3/2/2006	
Sample ID: IPB2465-09 (PIZB-01-100 - Reporting Units: mg/kg	Soil)							
Perchlorate	EPA 314.0 MOD.	6C01096	0.040	0.88	1	3/1/2006	3/2/2006	



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB2465

Sampled: 02/27/06

Received: 02/27/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C01096 Extracted: 03/01/06										
Blank Analyzed: 03/01/2006 (6C01096-E	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/01/2006 (6C01096-BS	51)									
Perchlorate	0.533	0.040	mg/kg	0.500		107	85-115			
Matrix Spike Analyzed: 03/01/2006 (6C)	01096-MS1)				Source: I	PB2333-1	0			
Perchlorate	0.516	0.040	mg/kg	0.500	ND	103	80-120			
Matrix Spike Dup Analyzed: 03/01/2006	(6C01096-M	SD1)			Source: I	PB2333-1	0			
Perchlorate	0.537	0 040	mg/kg	0 500	ND	107	80-120	4	20	
Batch: 6C01097 Extracted: 03/01/06										
Blank Analyzed: 03/02/2006 (6C01097-I	BLK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/03/2006 (6C01097-B	S1)									
Perchlorate	0 541	0 040	mg/kg	0.500		108	85-115			
Matrix Spike Analyzed: 03/02/2006 (6C	01097-MS1)				Source: 1	PB2333-0	9			
Perchlorate	0,548	0.040	mg/kg	0 500	0.019	106	80-120			
Matrix Spike Dup Analyzed: 03/02/2000	6 (6C01097-M	(SD1)			Source:	(PB2333-0	9			
Perchlorate	0.549	0 040	mg/kg	0.500	0.019	106	80-120	. 0	20	



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number. IPB2465

Sampled. 02/27/06

Received: 02/27/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E. Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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Geomatrix-Corona

Project ID. Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB2465

Sampled: 02/27/06 Received. 02/27/06

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method	Matrix	Nelac	California
EPA 314.0 MOD	Soil	N/A	N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled. 02/27/06 Received: 02/27/06

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Issued: 03/06/06 13:59

NELAP #01108CA California ELAP#1197 CSDLAC #10117

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This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT:

Samples were received intact, at 5°C, on ice and with chain of custody documentation.

A CONTROL OF THE PROPERTY OF T

HOLDING TIMES:

All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION:

Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA:

All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Enclosed are results for samples IPB2465-07 and IPB2465-08. Results for all other samples were sent

under separate cover

SUBCONTRACTED.

No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPB2465-07	PIZB-01-80	Soil
IPB2465-08	PIZB-01-90	Soil

Reviewed By:

Del Mar Analytical, Irvine

Patty Mata Project Manager



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260 3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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2520 E. Suinset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

250 East Rincon Street, Suite 204 Corona, CA 92879

Attention: Rick Rees

Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB2465

Sampled. 02/27/06

Received: 02/27/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2465-07 (PIZB-01-80 - S Reporting Units: mg/kg Perchlorate	oil) EPA 314.0 MOD.	6C01096	0.20	1.3	5	3/1/2006	3/2/2006	
Sample ID: IPB2465-08 (PIZB-01-90 - S Reporting Units: mg/kg	oil)				J			
Perchlorate	EPA 314.0 MOD.	6C01096	0.20	0.99	5	3/1/2006	3/2/2006	



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB2465

Sampled: 02/27/06

Received: 02/27/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C01096 Extracted: 03/01/06										
Blank Analyzed: 03/01/2006 (6C01096-B	LK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/01/2006 (6C01096-BS	1)									
Perchlorate	0 533	0 040	mg/kg	0 500		107	85-115			
Matrix Spike Analyzed: 03/01/2006 (6C0	1096-MS1)				Source: I	PB2333-1	0			
Perchlorate	0.516	0.040	mg/kg	0.500	ND	103	80-120			
Matrix Spike Dup Analyzed: 03/01/2006	(6C01096-MS	D1)			Source: I	PB2333-1	0			
Perchlorate	0.537	0.040	mg/kg	0.500	ND	107	80-120	4	20	



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879

250 East Rincon Street, Suite 204

Report Number: IPB2465

Sampled: 02/27/06 Received: 02/27/06

Attention: Rick Rees

DATA QUALIFIERS AND DEFINITIONS

ND

Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD

Relative Percent Difference



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number: IPB2465

Sampled: 02/27/06

Received: 02/27/06

Certification Summary

Del Mar Analytical, Irvine

Method Matrix Ne

Nelac

California

EPA 314.0 MOD.

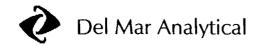
Soil

N/A

N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

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LABORATORY REPORT

Prepared For: Geomatrix-Corona

Project: Aerojet Azusa 250 East Rincon Street, Suite 204

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

Sampled: 02/28/06 Received: 02/28/06

and the confidence of the conf

Issued: 03/04/06 16:39

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IPB2640-01	PIZB-02-35	Soil
IPB2640-02	PIZB-02-40	Soil
IPB2640-03	PIZB-02-45	Soil
IPB2640-04	PIZB-02-50	Soil
IPB2640-05	PIZB-02-60	Soil
IPB2640-06	PIZB-02-70	Soil
IPB2640-07	PIZB-02-80	Soil
IPB2640-08	PIZB-02-90	Soil
IPB2640-09	PIZB-02-100	Soil

Reviewed By:

Del Mar Analytical, Irvine

Michele Chamberlin For Patty Mata

Michie Chamberlin

Project Manager



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPB2640

Sampled: 02/28/06

Received: 02/28/06

IN	OR	CA	IN	ICS
11.4		~~	X	100

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2640-01 (PIZB-02-35 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01097	0.040	0.042	0.998	3/1/2006	3/2/2006	
Sample ID: IPB2640-02 (PIZB-02-40 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01097	0.040	0.087	0.998	3/1/2006	3/2/2006	
Sample ID: IPB2640-03 (PIZB-02-45 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01097	0.040	0.041	0.998	3/1/2006	3/2/2006	
Sample ID: IPB2640-04 (PIZB-02-50 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01097	0.040	0.10	0.998	3/1/2006	3/2/2006	
Sample ID: IPB2640-05 (PIZB-02-60 - Soil Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C01097	0.040	0.28	0.998	3/1/2006	3/2/2006	
Sample ID: IPB2640-06 (PIZB-02-70 - Soi Reporting Units: mg/kg Perchlorate	EPA 314 0 MOD.	6C01097	0.040	ND	0.995	3/1/2006	3/2/2006	
Sample ID: IPB2640-07 (PIZB-02-80 - Soi Reporting Units: mg/kg Perchlorate		6C01097	0.040	0.088	0.995	3/1/2006	3/2/2006	
Sample ID: IPB2640-08 (PIZB-02-90 - Soi Reporting Units: mg/kg	1)							
Perchlorate Sample ID: IPB2640-09 (PIZB-02-100 - So Reporting Units: mg/kg	EPA 314.0 MOD.	6C01097	0.040	ND	0.998	3/1/2006	3/2/2006	
Perchlorate	EPA 314.0 MOD.	6C01097	0.040	0.055	0.998	3/1/2006	3/2/2006	



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number. IPB2640

Sampled: 02/28/06

Received: 02/28/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C01097 Extracted: 03/01/06										
Blank Analyzed: 03/02/2006 (6C01097-Bl	LK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/03/2006 (6C01097-BS))		•							
Perchlorate	0.541	0.040	mg/kg	0.500		108	85-115			
Matrix Spike Analyzed: 03/02/2006 (6C0	1097-MS1)				Source: Il	PB2333-09	9			
Perchlorate	0 548	0.040	mg/kg	0.500	0 019	106	80-120			
Matrix Spike Dup Analyzed: 03/02/2006	(6C01097-MSI	D 1)			Source: Il	PB2333-09	•			
Perchlorate	0.549	0.040	mg/kg	0.500	0.019	106	80-120	0	20	





Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPB2640

Sampled: 02/28/06

Received: 02/28/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879

Report Number: IPB2640

Sampled: 02/28/06 Received. 02/28/06

Attention: Rick Rees

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method Matrix Nelac California

EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www testamericainc.com

CHAIN-OF-CUSTODY RECORD PROJECT NAME A EROJET - AJSA PERKIN ELMER AOC CLIENT INFORMATION A EXCLUSET - ALSA LABORATORY NAME REPORTING REQUIREMENTS PROJECT NUMBER 7190.004 LABORATORY ADDRESS Rick REES TURNAROUND TIME SEE COMMETS IEV. 42, CA 92614 LABORATORY CONTACT SAMPLE SHIPMENT METHOD Gr. GEOTRACKER REQUIRED YES LABORATORY PHONE NUMBER Coveren. SITE SPECIFIC GLOBAL ID NO **ANALYSES** SAMPLERS (SIGNATURE): of Containers J 3 MS/MSD SAMPLE CONTAINER **ADDITIONAL** DATE TIME NUMBER TYPE AND SIZE COMMENTS 5 GIASS 4 OZ JAK X 2-22-06 09:04 PIZE-02-35 NORMOL TAT S X X 2-28-06 09:16 PIZB-0Z-40 11 NOWMAL TAT S 11 NORMAL TAT 2-28-06 09:25 PIZB-02-45 11 S 2-28-06 09:38 PIZB-02-50 X 11 3 DAY TAT 11 S X " X 2-28-06 10:00 PIZB-02-60 3 DAY TAT 11 11 S X 2-28-06 10:25 PILB-02-70 3 Day TAT N S 1 X 3 DAY THY 2-28-06 10:48 PIZB-02-80 Tī 5 X X 2-28-06 11:15 PIZB-02-90 VI. 3 => THE 11 S . 2-28-06 11:34 PIZB-02-100 3 DAY TAT DATE TIME RECEIVED BY: TOTAL NUMBER OF CONTAINERS: DATE TIME RELINQUISHED BY SIGNATURE: SAMPLING COMMENTS: PRINTED NAME DAVE 2/2016 1600 B. HERLINANSADER Cyjomatery 250 East Rincon Street, Suite 204 PRINTED NAME. PRINTED NAME **Geomatrix** Corona, California 92879-1363

COMPANY

COMPANY:

Tel 951.273.7400 Fax 951.273.7420



LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 03/01/06 Received: 03/02/06

Service in the state of the service order for the service order or the service of

Issued: 03/07/06 09:50

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Only the rush perchlorate sample results are included in this report. All other results will be sent under

separate cover when complete.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPC0311-01	PIZB-03-70	Soil
IPC0311-02	PIZB-03-80	Soil
IPC0311-03	PIZB-03-90	Soil
IPC0311-04	PIZB-03-100	Soil

Reviewed By:

Del Mar Analytical, Irvine

Patty Mata Project Manager





Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPC0311

Sampled: 03/01/06

Received. 03/02/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0311-01 (PIZB-03-70 - Soil)			Sampled:	03/01/06			
Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	6C03128	0.040	0.064	0.998	3/3/2006	3/4/2006	
Sample ID: IPC0311-02 (PIZB-03-80 - Soil Reporting Units: mg/kg)			Sampled:	03/01/06			
Perchlorate	EPA 314.0 MOD.	6C03128	0.040	0.073	0.998	3/3/2006	3/4/2006	
Sample ID: IPC0311-03 (PIZB-03-90 - Soil)			Sampled:	03/01/06			
Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	6C03128	0.040	ND	0.998	3/3/2006	3/4/2006	
Sample ID: IPC0311-04 (PIZB-03-100 - So	il)			Sampled:	03/01/06			
Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	6C03128	0.040	ND	0.998	3/3/2006	3/4/2006	



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPC0311

Sampled: 03/01/06

Received: 03/02/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C03128 Extracted: 03/03/06										
Blank Analyzed: 03/04/2006 (6C03128-B	LK1)									
Perchiorate	ND	0 040	mg/kg							
LCS Analyzed: 03/04/2006 (6C03128-BS	31)									
Perchlorate	0 514	0.040	mg/kg	0 500		103	85-115			
Matrix Spike Analyzed: 03/04/2006 (6C6)3128-MS1)				Source: I	PC0311-0	1			
Perchlorate	0.572	0 040	mg/kg	0 499	0.064	102	80-120			
Matrix Spike Dup Analyzed: 03/04/2006	(6C03128-M	ISD1)			Source: I	PC0311-0	1			
Perchlorate	0.574	0 040	mg/kg	0 499	0 064	102	80-120	0	20	



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9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

Corona, CA 92879
Attention: Rick Rees

Report Number: IPC0311

Sampled: 03/01/06 Received: 03/02/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

RPD Relative Percent Difference





Project ID: Aerojet Azusa

007190.004.1 7

Corona, CA 92879 Attention: Rick Rees Report Number: IPC0311

Sampled. 03/01/06

Received: 03/02/06

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www testamericainc.com

Clar

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CHAIN-OF-CUSTODY RECORD

COR 10132

PROJECT		HENOTE	ET - A	421	LABORATORY NAME LABORATORY ADDRESS LABORATORY ADDRESS							DATE 3-2-06 PAGE Z OF CLIENT INFORMATION AGRECUTET - ALSA REPORTING REQUIREMENTS								L OF 2					
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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004

Sampled: 03/01/06 Received: 03/01/06

Issued: 03/06/06 12:59

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical The Chain of Custody, I page, is included and is an integral part of this report

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar HOLDING TIMES:

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPC0162-01	PIZB-04A-60	Soil
IPC0162-02	PIZB-04A-70	Soil
IPC0162-03	PIZB-04A-80	Soil
IPC0162-04	PIZB-04A-90	Soil
IPC0162-05	PIZB-04A-100	Soil
IPC0162-06	PIZB-03-35	Soil
IPC0162-07	PIZB-03-40	Soil
IPC0162-08	PIZB-03-45	Soil
IPC0162-09	PIZB-03-50	Soil
IPC0162-10	PIZB-03-60	Soil

Reviewed By:

Del Mar Analytical, Irvine

Patty Mata Project Manager



250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004

Corona, CA 92879 Attention: Rick Rees Report Number: IPC0162

Sampled: 03/01/06

Received: 03/01/06

INORGANICS

Analyte	Method	Batch 1	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0162-01 (PIZB-04A-60 - So Reporting Units: mg/kg	oil)			Sampled:	03/01/06			
Perchlorate	EPA 314.0 MOD.	6C02116	0.040	0.12	0.998	3/2/2006	3/3/2006	
Sample ID: IPC0162-02 (PIZB-04A-70 - Se Reporting Units: mg/kg	oil)			Sampled:	03/01/06			
Perchlorate	EPA 314.0 MOD.	6C02116	0.040	0.11	i	3/2/2006	3/3/2006	
Sample ID: IPC0162-03 (PIZB-04A-80 - Se Reporting Units: mg/kg	oil)			Sampled:	03/01/06			
Perchlorate	EPA 314.0 MOD.	6C02116	0.040	0.10	, 0.995	3/2/2006	3/4/2006	
Sample ID: IPC0162-04 (PIZB-04A-90 - Se Reporting Units: mg/kg	oil)			Sampled:	03/01/06			
Perchlorate	EPA 314.0 MOD.	6C02116	0.040	0.058	1	3/2/2006	3/4/2006	
Sample ID: IPC0162-05 (PIZB-04A-100 - : Reporting Units: mg/kg	Soil)			Sampled	: 03/01/06			
Perchlorate	EPA 314.0 MOD.	6C02116	0.040	ND	1	3/2/2006	3/4/2006	
Sample ID: IPC0162-06 (PIZB-03-35 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/01/06			
Perchlorate	EPA 314 0 MOD.	6C02116	0.040	0.14	0.998	3/2/2006	3/4/2006	
Sample ID: IPC0162-07 (PIZB-03-40 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/01/06			
Perchlorate	EPA 314 0 MOD.	6C02116	0.040	ND	0.998	3/2/2006	3/4/2006	
Sample ID: IPC0162-08 (PIZB-03-45 - Soi Reporting Units: mg/kg	i)			Sampled	: 03/01/06			
Perchlorate	EPA 314.0 MOD.	6C02116	0.040	0.098	0.998	3/2/2006	3/4/2006	
Sample ID: IPC0162-09 (PIZB-03-50 - So Reporting Units: mg/kg	ii)			Sampled	: 03/01/06			
Perchlorate	EPA 314.0 MOD.	6C02116	0.040	0.098	0.998	3/2/2006	3/4/2006	
Sample ID: IPC0162-10 (PIZB-03-60 - So	il)			Sampled	: 03/01/06			
Reporting Units: mg/kg Perchlorate	EPA 314 0 MOD.	6C02116	0.040	0.079	0.995	3/2/2006	3/4/2006	





Project ID: Aerojet Azusa

007190.004

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPC0162

Sampled: 03/01/06

Received: 03/01/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 6C02116 Extracted: 03/02/06										
Blank Analyzed: 03/03/2006 (6C02116-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/03/2006 (6C02116-BS	1)									
Perchlorate	0 534	0.040	mg/kg	0 500		107	85-115			
Matrix Spike Analyzed: 03/03/2006 (6C0	2116-MS1)				Source: I	PC0162-0	1			•
Perchlorate	0 710	0.040	mg/kg	0.500	0.12	118	80-120			
Matrix Spike Dup Analyzed: 03/03/2006	(6C02116-N	ASD1)			Source: I	PC0162-0	1			
Perchlorate	0.649	0.040	mg/kg	0.499	0.12	106	80-120	9	20	





Project ID: Aerojet Azusa

007190.004

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPC0162

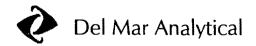
Sampled: 03/01/06

Received: 03/01/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr , Suite A. Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004

Corona, CA 92879 Attention: Rick Rees Report Number: IPC0162

Sampled: 03/01/06

Received: 03/01/06

Certification Summary

Del Mar Analytical, Irvine

250 East Rincon Street, Suite 204

Method Matrix Nelac California

EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www testamericainc.com



CHAIN-OF-CUSTODY RECORD

COR 10133

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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004.1.7

Sampled: 03/02/06 Received: 03/02/06

Issued. 03/17/06 13:40

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION Samples requiring preservation were verified prior to sample analysis.

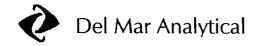
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Only the standard TAT perchlorate sample results are included in this report. All other results were sent

under separate cover.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ABORATORY ID	CLIENT ID	MATRIX
IPC0311-05	PSZB-52-1	Soil
IPC0311-06	PSZB-52-2.5	Soil
IPC0311-07	PSZB-52-5	Soil
IPC0311-08	PSZB-52-7.5	Soil
IPC0311-09	PSZB-52-10	Soil
IPC0311-10	PSZB-52-15	Soil
IPC0311-11	PSZB-52-20	Soil
IPC0311-12	PSZB-52-25	Soil
IPC0311-13	PSZB-52-30	Soil
IPC0311-14	PSZB-52-35	Soil



Geomatrix-Corona 250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa 007190.004.17

Sampled: 03/02/06

Report Number: IPC0311 Received: 03/02/06

LABORATORY ID	CLIENT ID	MATRIX
IPC0311-15	PSZB-52-40	Soil
IPC0311-16	PSZB-48-1	Soil
IPC0311-17	PSZB-48-2.5	Soil
IPC0311-18	PSZB-48-5	Soil
IPC0311-19	PSZB-48-7.5	Soil
IPC0311-20	PSZB-48-10	Soil
IPC0311-21	PSZB-48-15	Soil
IPC0311-22	PSZB-48-20	Soil
IPC0311-23	PSZB-48-25	Soil
IPC0311-24	PSZB-48-30	Soil
IPC0311-25-	PSZB-48-35	Soil
IPC0311-26	PSZB-48-40	Soil

Reviewed By:

Del Mar Analytical - Irvine

Patty Mata Project Manager



Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees 007190.004.1.7 Report Number: IPC0311 Sampled. 03/02/06

Received: 03/02/06

INORGANICS

		111011	O'M' I CO					
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0311-05 (PSZB-52-1 - Soil) Reporting Units: mg/kg				Sampled	03/02/06			
Perchlorate Perchlorate	EPA 314.0 MOD.	6C03128	0.040	0.67	0.998	3/3/2006	3/4/2006	
Sample ID: IPC0311-06 (PSZB-52-2.5 - Soi Reporting Units: mg/kg	il)			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03128	4.0	15	100	3/3/2006	3/6/2006	
Sample ID: IPC0311-07 (PSZB-52-5 - Soil) Reporting Units: mg/kg				Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03128	0.20	1.1	4.98	3/3/2006	3/8/2006	
Sample ID: IPC0311-08 (PSZB-52-7.5 - So Reporting Units: mg/kg	ii)			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03128	0.040	0.14	0.995	3/3/2006	3/4/2006	
Sample ID: IPC0311-09 (PSZB-52-10 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/02/06		v	
Perchlorate	EPA 314.0 MOD.	6C03128	0.040	0.13	0.993	3/3/2006	3/6/2006	
Sample ID: IPC0311-10 (PSZB-52-15 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/02/06			
Perchlorate .	EPA 314.0 MOD.	6C03128	0.040	0.16	0.998	3/3/2006	3/5/2006	
Sample ID: IPC0311-11 (PSZB-52-20 - Soi Reporting Units: mg/kg	il)			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD	6C03128	0.040	0.14	0.995	3/3/2006	3/5/2006	
Sample ID: IPC0311-12 (PSZB-52-25 - Soi Reporting Units: mg/kg	ii)			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03128	0.040	0.23	0.995	3/3/2006	3/5/2006	
Sample ID: IPC0311-13 (PSZB-52-30 - So Reporting Units: mg/kg	il)			Sampled	1: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03129	0.040	0.46	0.998	3/3/2006	3/4/2006	
Sample ID: 1PC0311-14 (PSZB-52-35 - So Reporting Units: mg/kg	il)			Sampled	1: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03129	0.040	0.071	0.998	3/3/2006	3/4/2006	

Del Mar Analytical - Irvine Patty Mata

Project Manager



Project 1D: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004.1.7

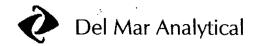
Corona, CA 92879 Attention: Rick Rees Report Number: 1PC0311

Sampled: 03/02/06 Received: 03/02/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0311-15 (PSZB-52-40 - Soi	1)			Sampled	03/02/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C03129	0.040	0.12	0.995	3/3/2006	3/4/2006	
Sample ID: IPC0311-16 (PSZB-48-1 - Soil) Reporting Units: mg/kg	1			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03129	0.040	ND	0.998	3/3/2006	3/4/2006	
Sample ID: IPC0311-17 (PSZB-48-2.5 - So Reporting Units: mg/kg	il)			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03129	0.040	ND	0.995	3/3/2006	3/4/2006	
Sample ID: IPC0311-18 (PSZB-48-5 - Soil) Reporting Units: mg/kg	•			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03129	0.040	ND	0.998	3/3/2006	3/4/2006	
Sample ID: IPC0311-19 (PSZB-48-7.5 - So Reporting Units: mg/kg	il)			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03129	0.040	ND	0.995	3/3/2006	3/4/2006	
Sample ID: IPC0311-20 (PSZB-48-10 - Soi Reporting Units: mg/kg	ii)			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03129	0 040	ND	0.995	3/3/2006	3/4/2006	
Sample ID: IPC0311-21 (PSZB-48-15 - So Reporting Units: mg/kg	il)			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03129	0.040	ND	0.995	3/3/2006	3/4/2006	
Sample ID: 1PC0311-22 (PSZB-48-20 - So Reporting Units: mg/kg	il)			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03129	0.040	ND	0.995	3/3/2006	3/4/2006	
Sample ID: IPC0311-23 (PSZB-48-25 - So Reporting Units: mg/kg	il)			Sampled	: 03/02/06			
Perchlorate	EPA 314.0 MOD.	6C03129	0.040	0.093	0.998	3/3/2006	3/4/2006	
Sample ID: IPC0311-24 (PSZB-48-30 - So	il)			Sampled	1: 03/02/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C03129	0.040	0.041	0.998	3/3/2006	3/4/2006	





Project ID: Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPC0311

Sampled: 03/02/06

Received: 03/02/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0311-25 (PSZB-48-35 - So Reporting Units: mg/kg	ii)			Sampled	03/02/06			
Perchlorate Perchlorate	EPA 314 0 MOD.	6C03129	0.040	ND	0.998	3/3/2006	3/4/2006	
Sample ID: IPC0311-26 (PSZB-48-40 - So	il)			Sampled	: 03/02/06		4	
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C03129	0.040	ND	0.995	3/3/2006	3/4/2006	



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004.1.7

Report Number: IPC0311

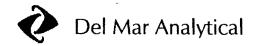
Sampled: 03/02/06

Received: 03/02/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C03128 Extracted: 03/03/06										
Blank Analyzed: 03/04/2006 (6C03128-I	BLK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/04/2006 (6C03128-BS	S1)									
Perchlorate	0.514	0 040	mg/kg	0.500		103	85-115			
Matrix Spike Analyzed: 03/04/2006 (6C	03128-MS1)				Source: I	PC0311-0	1			
Perchlorate	0.572	0 040	mg/kg	0 499	0 064	102	80-120			
Matrix Spike Dup Analyzed: 03/04/2006	6 (6C03128-M	SD1)			Source: I	PC0311-0	1			
Perchlorate	0.574	0 040	mg/kg	0 499	0.064	102	80-120	0	20	
Batch: 6C03129 Extracted: 03/03/06										
Blank Analyzed: 03/04/2006 (6C03129-)	BLK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/04/2006 (6C03129-B	S1)									
Perchlorate	0.495	0 040	mg/kg	0.500		99	85-115			
Matrix Spike Analyzed: 03/04/2006 (6C	03129-MS1)				Source: 1	PC0311-1	3			
Perchlorate	0.885	0 040	mg/kg	0 499	0.46	85	80-120			
Matrix Spike Dup Analyzed: 03/04/200	6 (6C03129-M	ISD1)			Source: 1	IPC0311-1	13			
Perchlorate	0.973	0.040	mg/kg	0.499	0.46	103	80-120	9	20	



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260 3297 1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370 1046 9830 South 51st St , Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004.1.7

Sampled: 03/02/06

Corona, CA 92879 Attention: Rick Rees Report Number: IPC0311 Received: 03/02/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

RPD Relative Percent Difference



17461 Deman Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Suinset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID. Aerojet Azusa

007190.004.1.7

Corona, CA 92879 Attention: Rick Rees Report Number. IPC0311

Sampled: 03/02/06

Received: 03/02/06

Certification Summary

Del Mar Analytical - Irvine

250 East Rincon Street, Suite 204

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	N/A

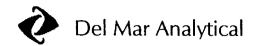
Nevada and NELAP provide analyte specific accreditations Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www testamericainc.com

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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

7190.004.0

Sampled: 03/03/06 Received: 03/03/06 Issued: 03/17/06 10:40

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPC0512-01	PSZB-70-1	Soil
IPC0512-02	PSZB-70-2.5	Soil
IPC0512-03	PSZB-70-5.0	Soil
IPC0512-04	PSZB-70-7.5	Soil
IPC0512-05	PSZB-70-10	Soil
IPC0512-06	PSZB-70-15	Soil
IPC0512-07	PSZB-70-20	Soil
IPC0512-08	PSZB-70-25	Soil
IPC0512-09	PSZB-70-30	Soil
IPC0512-10	PSZB-70-35	Soil
IPC0512-11	PSZB-70-40	Soil

Reviewed By:

Del Mar Analytical - Irvine

Patty Mata Project Manager



Geomatrix-Corona 250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

7190.004.0

Corona, CA 92879

Report Number: IPC0512

Sampled: 03/03/06 Received: 03/03/06

Attention: Rick Rees

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0512-01 (PSZB-70-1 - Soil)				Sampled:	03/03/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C06111	0.040	ND	0.998	3/6/2006	3/7/2006	
Sample ID: IPC0512-02 (PSZB-70-2.5 - Soi Reporting Units: mg/kg	1)	•		Sampled:	03/03/06			
Perchlorate	EPA 314.0 MOD.	6C06111	0.040	ND	0.995	3/6/2006	3/7/2006	
Sample ID: IPC0512-03 (PSZB-70-5.0 - Soi Reporting Units: mg/kg	1)			Sampled:	03/03/06			
Perchlorate	EPA 314.0 MOD.	6C06111	0 040	ND	0.995	3/6/2006	3/7/2006	
Sample ID: IPC0512-04 (PSZB-70-7.5 - Soi Reporting Units: mg/kg	1)		,	Sampled:	: 03/03/06			
Perchlorate	EPA 314.0 MOD.	6C06111	0.040	ND	0.998	3/6/2006	3/7/2006	
Sample ID: IPC0512-05 (PSZB-70-10 - Soil Reporting Units: mg/kg)			Sampled	: 03/03/06			
Perchlorate	EPA 314.0 MOD.	6C06111	0.040	ND	0.998	3/6/2006	3/7/2006	
Sample ID: IPC0512-06 (PSZB-70-15 - Soil Reporting Units: mg/kg	1)			Sampled	: 03/03/06			
Perchlorate	EPA 314.0 MOD.	6C06111	0.040	ND	0.998	3/6/2006	3/7/2006	
Sample ID: IPC0512-07 (PSZB-70-20 - Soil Reporting Units: mg/kg	1)			Sampled	: 03/03/06			
Perchlorate	EPA 314.0 MOD.	6C06111	0.040	ND	0.995	3/6/2006	3/7/2006	
Sample ID: IPC0512-08 (PSZB-70-25 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/03/06			
Perchlorate	EPA 314.0 MOD.	6C06111	0.040	ND	0.995	3/6/2006	3/7/2006	
Sample ID: IPC0512-09 (PSZB-70-30 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/03/06			
Perchlorate	EPA 314.0 MOD.	6C06111	0.040	ND	0.998	3/6/2006	3/7/2006	
Sample ID: IPC0512-10 (PSZB-70-35 - Soi	i)			Sampled	: 03/03/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C06111	0.040	ND	0.995	3/6/2006	3/7/2006	





Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

7190.004.0

Report Number: IPC0512

Sampled: 03/03/06

Received: 03/03/06

Corona, CA 92879 Attention: Rick Rees

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0512-11 (PSZB-70-40 - Soi	l)			Sampled	: 03/03/06			
Reporting Units: mg/kg								
Perchlorate	EPA 314.0 MOD.	6C06111	0.040	ND	0.998	3/6/2006	3/7/2006	



Project ID: Aerojet Azusa

7190.004.0

Corona, CA 92879 Attention. Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPC0512

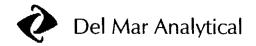
Sampled: 03/03/06

Received: 03/03/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Resúlt	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C06111 Extracted: 03/06/06										
Blank Analyzed: 03/07/2006 (6C06111-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/07/2006 (6C06111-BS	1)									
Perchlorate	0.532	0 040	mg/kg	0.500		106	85-115			
Matrix Spike Analyzed: 03/07/2006 (6C))6111-MS1)				Source: I	PC0523-0	1			
Perchlorate	0.573	0 040	mg/kg	0 499	0.069	101	80-120			
Matrix Spike Dup Analyzed: 03/07/2006	(6C06111-N	(ISD1)			Source: I	PC0523-0	1			
Perchlorate	0 679	0 040	mg/kg	0.499	0.069	122	80-120	17	20	MI



17461 Derian Ave , Suite 100, Irvane, CA 92614 (949) 261-1022 FAX (949) 260 3297
1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
9830 South 51st St , Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

7190 004.0

Corona, CA 92879

Report Number: IPC0512

Sampled: 03/03/06

Received: 03/03/06

Attention: Rick Rees

250 East Rincon Street, Suite 204

DATA QUALIFIERS AND DEFINITIONS

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference





250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

7190.004.0

Report Number: IPC0512

Sampled: 03/03/06

Received: 03/03/06

Certification Summary

Del Mar Analytical - Irvine

Method Matrix Nelac California
EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

02 CHAIN-OF-CUSTODY RECORD COR 10133 IDC0512 DATE: 313106 PAGE | OF | PROJECT NAME Actifer - AISA PEIKINEIDER LABORATORY NAME:
DEL WAY AMO WITTEL
LABORATORY ADDRESS.
174 W. D. CAN ST CLIENT INFORMATION
PERCECT - ALSA REPORTING REQUIREMENTS. PROJECT NUMBER 7190.3011 RESULTS TO FACK Peus TURNAROUND TIME. . St+ communicats 1/ VINC: CA 92 WILL LABORATORY CONTACT SAMPLE SHIPMENT METHOD (40) GEOTRACKER REQUIRED LABORATORY PHONE NUMBER · courter SITE SPECIFIC GLOBAL ID NO **ANALYSES** SAMPLERS (SIGNATURE): an ofundly भूर of Conta EDA MS/MSD SAMPLE Cooled CONTAINER ADDITIONAL DATE TIME NUMBER TYPE AND SIZE COMMENTS 11 02 61955 JAC S 920 PSZB-70-1 3 DAY TAT 31317E S 922 PSZB-70-25 313106 Normal TAT 10 S 924 PSLB - 70-5.0 NOEMAL TAT 313106 31 \overline{X} ς NAMMEL TAT 313100 926 PSZB-70-75 11 11 1 Normal TAT 313106 928 PS2B-70-10 5 11 It S 3/3/06 935 PSZB-70-15 1 Vermal TAT 11 S 940 PSZB-70-20 Normal TAT 313100 11 S 313106/1000 PSZB-70-25 NOIMAL TAT 1 1 3131 06 1005 PSZB-70-30 5 Novneyl TAT 11 1 (NOVINGI TAT S 313106 1013 PSZB-70-35 T1 11 3/3/06 100C PSZB-70-40 1 Mormal TAT] 1 TOTAL NUMBER OF CONTAINERS: DATE TIME RECEIVED BY: DATE TIME **RELINQUISHED BY:** SIGNATURE SIGNATURE Jamel 22 SAMPLING COMMENTS: 313/q 1552 PRINTED NAME 1/04 15521 PANTE MONTH TALKE POWER COMPANY CONSILITANTS
SIGNATURE
REINITED NAME: FOWER
COMPANY: OMAI 1900 SIGNATURE. 250 East Rincon Street, Suite 204 PRINTED NAME. PRINTED NAME **Geomatrix** Corona, California 92879-1363 COMPANY: Tel 951.273.7400 Fax 951.273.7420 COMPANY.



LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

-1 - -1 -

007190.004

Sampled: 03/06/06 Received: 03/06/06 Issued: 03/20/06 10:40

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Only the standard TAT Perchlorate sample results are included in this report. All other results were sent

under separate cover.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPC0595-01	PSZB-68-7.5	Soil
IPC0595-02	PSZB-68-10	Soil
IPC0595-03	PSZB-68-15	Soil
IPC0595-04	PSZB-68-20	Soil
IPC0595-05	PSZB-68-25	Soil
IPC0595-06	PSZB-68-30	Soil
IPC0595-07	PSZB-68-35	Soil
IPC0595-08	PSZB-68-40	Soil
IPC0595-09	PSZB-71-1	Soil
IPC0595-10	PSZB-71-2.5	Soil





Geomatrix-Corona Project ID: Aerojet Azusa

 250 East Rincon Street, Suite 204
 007190.004
 Sampled: 03/06/06

 Corona, CA 92879
 Report Number: IPC0595
 Received: 03/06/06

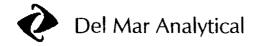
Attention: Rick Rees

LABORATORY ID	CLIENT ID	MATRIX
IPC0595-11	PSZB-71-5	Soil
IPC0595-15	PSZB-69-7.5	Soil
IPC0595-16	PSZB-69-10	Soil
IPC0595-17	PSZB-69-15	Soil
IPC0595-18	PSZB-69-20	Soil
IPC0595-19	PSZB-69-25	Soil
IPC0595-20	PSZB-69-30	Soil
IPC0595-21	PSZB-69-35	Soil
IPC0595-22	PSZB-69-40	Soil
IPC0595-23	PSZB-73-1	Soil
IPC0595-24	PSZB-73-2.5	Soil
IPC0595-25	PSZB-73-5	Soil

Reviewed By:

Del Mar Analytical - Irvine

Patty Mata Project Manager



Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004

Corona, CA 92879 Attention: Rick Rees Report Number: IPC0595

Sampled: 03/06/06 Received: 03/06/06

INORGANICS

THO MOTINGS								
Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0595-01 (PSZB-68-7.5 - Soi	i)			Sampled	03/06/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	i	3/8/2006	3/8/2006	
		0000093	0.040			3/6/2000	3/0/2000	
Sample ID: IPC0595-02 (PSZB-68-10 - Soil Reporting Units: mg/kg)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0 998	3/8/2006	3/8/2006	
Sample ID: IPC0595-03 (PSZB-68-15 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.998	3/8/2006	3/8/2006	
Sample ID: IPC0595-04 (PSZB-68-20 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.995	3/8/2006	3/8/2006	
Sample ID: IPC0595-05 (PSZB-68-25 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/06/06			
Perchiorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.995	3/8/2006	3/8/2006	
Sample ID: IPC0595-06 (PSZB-68-30 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.998	3/8/2006	3/8/2006	
Sample ID: IPC0595-07 (PSZB-68-35 - Soi Reporting Units: mg/kg	i)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.998	3/8/2006	3/8/2006	
Sample ID: IPC0595-08 (PSZB-68-40 - Soi Reporting Units: mg/kg	il)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.995	3/8/2006	3/8/2006	
Sample ID: IPC0595-09 (PSZB-71-1 - Soil Reporting Units: mg/kg)			Sampled	l: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.995	3/8/2006	3/8/2006	
Sample ID: IPC0595-10 (PSZB-71-2.5 - So	oil)			Sampled	l: 03/06/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	1	3/8/2006	3/8/2006	



250 East Rincon Street, Suite 204

Project ID: Aerojet Azusa

007190.004

Corona, CA 92879 Attention. Rick Rees Report Number: IPC0595

Sampled: 03/06/06

Received: 03/06/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0595-11 (PSZB-71-5 - Soil)				Sampled	: 03/06/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.995	3/8/2006	3/8/2006	
Sample 1D: IPC0595-15 (PSZB-69-7.5 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.998	3/8/2006	3/8/2006	
Sample ID: IPC0595-16 (PSZB-69-10 - Soil Reporting Units: mg/kg	1)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.998	3/8/2006	3/8/2006	
Sample ID: IPC0595-17 (PSZB-69-15 - Soil Reporting Units: mg/kg))			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	1	3/8/2006	3/8/2006	
Sample ID: IPC0595-18 (PSZB-69-20 - Soil Reporting Units: mg/kg	1)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.998	3/8/2006	3/8/2006	
Sample ID: IPC0595-19 (PSZB-69-25 - Soi Reporting Units: mg/kg	i)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.995	3/8/2006	3/8/2006	·
Sample ID: IPC0595-20 (PSZB-69-30 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	1	3/8/2006	3/8/2006	
Sample ID: IPC0595-21 (PSZB-69-35 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/06/06	•		
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.998	3/8/2006	3/8/2006	
Sample ID: IPC0595-22 (PSZB-69-40 - Soi Reporting Units: mg/kg	l)			Sampled	l: 03/06/06			
Perchlorate	EPA 314.0 MOD.	6C08093	0.040	ND	0.995	3/8/2006	3/9/2006	
Sample ID: IPC0595-23 (PSZB-73-1 - Soil))			Sampled	I: 03/06/06	,		
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C08093	0.040	0.10	0.995	3/8/2006	3/9/2006	





Project ID. Aerojet Azusa

007190.004

250 East Rincon Street, Suite 204 Corona, CA 92879 Attention: Rick Rees

Report Number: IPC0595

Sampled: 03/06/06

Received: 03/06/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0595-24 (PSZB-73-2.5 - Soil) Reporting Units: mg/kg				Sampled				
Perchlorate	EPA 314.0 MOD.	6C08094	0.040	0.11	0.998	3/8/2006	3/9/2006	
Sample ID: IPC0595-25 (PSZB-73-5 - Soil)				Sampled	: 03/06/06			
Reporting Units: mg/kg Perchlorate	EPA 314.0 MOD.	6C08094	0.040	0.042	0.998	3/8/2006	3/9/2006	



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004

Report Number: IPC0595

Sampled. 03/06/06

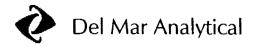
Received: 03/06/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C08093 Extracted: 03/08/06										
Blank Analyzed: 03/08/2006 (6C08093-B	LK1)									
Perchlorate	ND	0.040	mg/kg							
LCS Analyzed: 03/08/2006 (6C08093-BS	SI)									
Perchlorate	0.521	0 040	mg/kg	0.500		104	85-115			
Matrix Spike Analyzed: 03/08/2006 (6C08093-MS1)					Source: I	PC0595-0	j			
Perchlorate	0.520	0.040	mg/kg	0.498	ND	104	80-120			
Matrix Spike Dup Analyzed: 03/08/2006	(6C08093-MS	SD1)			Source: I	PC0595-0	1			
Perchlorate	0.521	0.040	mg/kg	0 500	ND	104	80-120	0	20	
Batch: 6C08094 Extracted: 03/08/06										
Blank Analyzed: 03/09/2006 (6C08094-E	BLK1)									
Perchlorate	ND	0.040	mg/kg							,
LCS Analyzed: 03/09/2006 (6C08094-BS	S1)	-								
Perchiorate	0.508	0 040	mg/kg	0 500		102	85-115			
Matrix Spike Analyzed: 03/09/2006 (6C	C08094-MS1)				Source: I	PC0595-2	4			
Perchlorate	0 613	0.040	mg/kg	0 499	0.11	101	80-120			
Matrix Spike Dup Analyzed: 03/09/2006	6 (6C08094-M	SD1)			Source: I	PC0595-2	4			
Perchlorate	0 594	0.040	mg/kg	0.499	0.11	97	80-120	3	20	





Project ID: Aerojet Azusa

007190.004

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPC0595

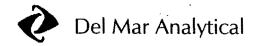
Sampled: 03/06/06

Received: 03/06/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St , Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004

Corona, CA 92879

Attention: Rick Rees

Report Number: IPC0595

Sampled. 03/06/06

Received: 03/06/06

Certification Summary

Del Mar Analytical - Irvine

Method

Matrix

Nelac

California

EPA 314.0 MOD.

Soil

N/A

N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

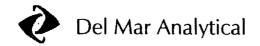
CHAIN-OF-CUSTODY RECORD

COR 10135

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LABORATORY REPORT

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Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

007190.004

Sampled: 03/06/06 Received: 03/06/06

Issued: 03/07/06 16:12

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION. Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Only the rush perchlorate sample results are included in this report. All other results will be sent under

separate cover when complete.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPC0595-12	PSZB-72-1	Soil
IPC0595-13	PSZB-72-2.5	Soil
IPC0595-14	PSZB-72-5	Soil

Reviewed By:

Del Mar Analytical, Irvine

Patty Mata Project Manager





Project ID. Aerojet Azusa

007190.004

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPC0595

Sampled: 03/06/06

Received: 03/06/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0595-12 (PSZB-72-1 - Soil Reporting Units: mg/kg)							
Perchlorate	EPA 314.0 MOD.	6C06115	0.040	0.044	i	3/6/2006	3/7/2006	
Sample ID: IPC0595-13 (PSZB-72-2.5 - So Reporting Units: mg/kg	vil)							
Perchlorate	EPA 314.0 MOD.	6C06115	0.040	0.043	1.01	3/6/2006	3/7/2006	
Sample ID: 1PC0595-14 (PSZB-72-5 - Soil Reporting Units: mg/kg)							
Perchlorate	EPA 314.0 MOD.	6C06115	0.040	ND	1.01	3/6/2006	3/7/2006	



Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004 Report Number: IPC0595

Corona, CA 92879 Attention. Rick Rees Sampled: 03/06/06 Received: 03/06/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C06115 Extracted: 03/06/06										
Blank Analyzed: 03/07/2006 (6C06115-B	LKI)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/07/2006 (6C06115-BS	1)									
Perchlorate	0 517	0.040	mg/kg	0.500		103	85-115			
Matrix Spike Analyzed: 03/07/2006 (6C0	6115-MS1)				Source: I	PC0595-1	2			
Perchlorate	0 589	0.040	mg/kg	0.500	0.044	109	80-120			
Matrix Spike Dup Analyzed: 03/07/2006	(6C06115-MS	D1) ·			Source: I	PC0595-1	2			
Perchlorate	0.602	0.040	mg/kg	0 501	0.044	111	80-120	2	20	



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Suissei Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPC0595

Sampled: 03/06/06

Received: 03/06/06

DATA QUALIFIERS AND DEFINITIONS

ND

Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD

Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr , Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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Geomatrix-Corona

Project ID: Aerojet Azusa

250 East Rincon Street, Suite 204

007190.004

Sampled: 03/06/06

Corona, CA 92879 .

Report Number: IPC0595

Received: 03/06/06

Attention: Rick Rees

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 314.0 MOD.	Soil	N/A	N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

COR 10135

PROJECT	NAME /	HERUJE	T- A	ISA					EN.							DATE 3	· 6 -	عاد		P	AGE	1	OF 2_
PROJECT NUME	BER 710	10.004			LABO	RATORY	NAME	PN	SLY T	ركه	CLIENT IN	FORMA	TION	Amote	T-AISA	REPORTING RE	QUIRE	MENT	rs				
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SAMPLE SHIPM	ENT METHOD				LABO	RATORY	CONTA	CT VVG (*	7							GEOTRACKER	REQUI	RED				YES	(Qu) e
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3-6-06	29:07	P5-8-	68-1	5	X										"	"	S			X		1	NORMAL TOT
3-6-06	09:10	P528 -	-68-	20	X										"	//	S			X		1	NOMENAL TAT
3-6-06	09:17	PSZB-	68 - E	25	X										"	"	S			X		1	NONEMBL TET
3-6-86	09:20	P528-	68 - 3	٥	X										"	"	5			X		1	NO-EMBL THT
3-6-06	01127	7588-1	68 - 3	5	X										"	"	S			X		1	Novembe TOT
3-6-06	01:35	PSZB-	48-4	10	X										"	//	S			X		1	NOWMAL TOT
3-6-26	10:06	PSZB-	71-1		X										"	"	S			X		1	STATE TOT
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(140)

CHAIN-OF-CUSTODY RECORD

COR 10136

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DATE	TIME		AMPLE JMBEF		EPA							Ī							TAINER AND SIZE	Soil (S), W Vapor (V),	Filtered	esen	Cooled	MS/MSD	ŏ	ADDITIONAL
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LABORATORY REPORT

Prepared For: Geomatrix-Corona

250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project: Aerojet Azusa

""是这种思想,我是我们就是我们是是不是多的,但是我们是没有一个的。""不是我们的,我们就没有一个的人的,我们也会不会不要的。""我们就是这个的,这一个一个人

007190.004

Sampled: 03/07/06 Received: 03/08/06

Issued: 03/20/06 15:57

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IPC0917-01	PSZB-72-7.5	Soil
IPC0917-02	PSZB-72-10	` Soil
IPC0917-03	PSZB-72-15	Soil
IPC0917-04	PSZB-72-20	Soil
IPC0917-05	PSZB-72-25	Soil
IPC0917-06	PSZB-72-30	Soil
IPC0917-07	PSZB-72-35	Soil
IPC0917-08	PSZB-72-40	Soil

Reviewed By:

Del Mar Analytical - Irvine

Patty Mata Project Manager



250 East Rincon Street, Suite 204

Corona, CA 92879 Attention: Rick Rees Project ID: Aerojet Azusa

007190.004

Report Number: IPC0917

Sampled: 03/07/06

Received: 03/08/06

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0917-01 (PSZB-72-7.5 - Soil Reporting Units: mg/kg	il)			Sampled	: 03/07/06			
Perchlorate	EPA 314.0 MOD.	6C13075	0.040	ND	0.998	3/13/2006	3/13/2006	
Sample ID: IPC0917-02 (PSZB-72-10 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/07/06			
Perchlorate	EPA 314.0 MOD.	6C13075	0.040	ND	0.998	3/13/2006	3/13/2006	
Sample ID: IPC0917-03 (PSZB-72-15 - Soi Reporting Units: mg/kg	1)			Sampled	: 03/07/06			
Perchlorate	EPA 314.0 MOD.	6C13075	0.040	ND	0.998	3/13/2006	3/13/2006	
Sample ID: IPC0917-04 (PSZB-72-20 - Soi Reporting Units: mg/kg	1)			Sampled	; 03/07/06			
Perchlorate Perchlorate	EPA 314.0 MOD.	6C13075	0.040	ND	0.998	3/13/2006	3/13/2006	
Sample ID: IPC0917-05 (PSZB-72-25 - Soi Reporting Units: mg/kg	1)			Sampled	l: 03/07/06			
Perchlorate Perchlorate	EPA 314.0 MOD.	6C13075	0.040	ND	0.998	3/13/2006	3/13/2006	
Sample ID: IPC0917-06 (PSZB-72-30 - Soi Reporting Units: mg/kg	l)			Sampled	l: 03/07/06			
Perchlorate	EPA 314.0 MOD.	6C13075	0.040	ND	0.995	3/13/2006	3/13/2006	
Sample ID: IPC0917-07 (PSZB-72-35 - Soi Reporting Units: mg/kg	l)			Sampled	1: 03/07/06			
Perchlorate	EPA 314.0 MOD.	6C13075	0.040	ND	0.995	3/13/2006	3/13/2006	
Sample ID: IPC0917-08 (PSZB-72-40 - Soi Reporting Units: mg/kg	il)			Sampled	1: 03/07/06			
Perchlorate	EPA 314.0 MOD.	6C13075	0.040	ND	0.998	3/13/2006	3/13/2006	





Project ID. Aerojet Azusa

007190.004

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPC0917

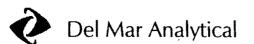
Sampled: 03/07/06

Received: 03/08/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C13075 Extracted: 03/13/06										
Blank Analyzed: 03/13/2006 (6C13075-E	LK1)									
Perchlorate	ND	0 040	mg/kg							
LCS Analyzed: 03/13/2006 (6C13075-BS	1)									i.
Perchlorate	0.494	0.040	mg/kg	0.500		99	85-115			
Matrix Spike Analyzed: 03/13/2006 (6C	13075-MS1)				Source: 1	PC0917-0	1			
Perchlorate	0.513	0 040	mg/kg	0.499	ND	103	80-120			
Matrix Spike Dup Analyzed: 03/13/2006	(6C13075-M	1SD1)			Source: I	PC0917-0	1			
Perchlorate	0 509	0.040	mg/kg	0.499	ND	102	80-120	ī	20	



17461 Derian Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E Cooley Dr , Suite A, Colion, CA 92324 (909) 370-4667 FAX (909) 370-1046
9830 South 51st St , Suite B 120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004

Corona, CA 92879 Attention: Rick Rees

250 East Rincon Street, Suite 204

Report Number: IPC0917

Sampled: 03/07/06

Received: 03/08/06

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference



17461 Denan Ave , Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E Cooley Dr , Suite A, Colton, CA 92324 (909) 370 4667 FAX (909) 370 1046
9830 South 51st St , Suite B-120, Phoenix, AZ 85044 (480) 785 0043 FAX (480) 785 0851
2520 E Sunset Rd #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Geomatrix-Corona

Project ID: Aerojet Azusa

007190.004

Corona, CA 92879 Attention: Rick Rees Report Number: IPC0917

Sampled: 03/07/06

Received. 03/08/06

Certification Summary

Del Mar Analytical - Irvine

250 East Rincon Street, Suite 204

Method Matrix Nelac California

EPA 314.0 MOD. Soil N/A N/A

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www testamericainc.com

CHAIN-OF-CUSTODY RECORD PROJECT NAME: A EROJET - AISA PERLY ELMER DOC CLIENT INFORMATION AGROJET - AISO PROJECT NUMBER 7190.004 DEL MAL ALBUTICAL REPORTING REQUIREMENTS LABORATORY ADDRESS RESULTS TO RICK REES TURNAROUND TIME S'EE COMMENTS IZVILLE, CA 92614 LABORATORY CONTACT SAMPLE SHIPMENT METHOD NO GEOTRACKER REQUIRED LABORATORY PHONE NUMBER (vivercen SITE SPECIFIC GLOBAL ID NO SAMPLERS (SIGNATURE): **ANALYSES** PCO917 7 Ñ MS/MSD SAMPLE CONTAINER Cooted DATE TIME NUMBER TYPE AND SIZE COMMENTS 3-7-06 14:15 PSZB -72 -7.5 4 02. GLASS JOIR 5 NORMAL TAT 3-7-06 14:17 PSEB - 72 - 10 S 11 3-7-06 14:28 PS ZB -72-15 11 5 $\overline{\tau}$ 77 X 3-7-06 14:31 PSZB-72-20 X 11 S 11 11 11 X 1 3-7-06 14:37 PSZB-72-25 11 11 5 × 11 11 3-1-06 14:40 PS ZB -72 - 30 11 s Х ĸ 11 11 3-7-06 14:48 PSZB -72-35 11 11 S 11 1. X 3-7-00 15:03 PSZB - 72 - 40 S X 11 DATE TIME TOTAL NUMBER OF CONTAINERS DATE TIME RECEIVED BY: 8 RELINQUISHED BY: SIGNATURE: SAMPLING COMMENTS. PRINTED NAME C'rouch PRINTED NAME: DEVISE ATCHISON COMPANIA SIGNATURE 7 SIGNATURE 3 and 3/8/06 3 PRINTED NAME: PRINTED NAME Craulh COMPANY COMPANY: SIGNATURE: SIGNATURE 250 East Rincon Street, Suite 204

> Corona, California 92879-1363 Tel 951.273.7400 Fax 951.273.7420

Geomatrix

PRINTED NAME

COMPANY:

PRINTED NAME

COMPANY: